

THIS ISSUE 155 000 COPIES

LIBRARY  
DEL. AGR. EXP. STATION

Marked Copy

LIBRARY  
DEL. AGR. EXP. STATION

JANUARY

1941

# Here's Why More Farm Tractors Are Equipped With **Firestone** GROUND GRIP TIRES Than With Any Other Make!

## FIRST IN TRACTION

Triple-braced traction bars will not bend or slip. No matter how tough the going, they dig in and grip. And the space between the bars is scientifically designed so that the tread automatically wipes itself clean. 52 to 89 extra inches of traction bar length, 21% flatter tread and 32% more tread bar contact with the ground assure greater traction in all soil conditions.

## FIRST IN VALUE

At no extra cost, you get all of these extra performance features, plus continuous traction bars which provide smoother riding and a deep, tough, weather-resisting tread which assures longer wear. Only the Firestone Ground Grip Tire gives you these extra advantages, because both the Ground Grip tread and the Gum-Dipped cord body are patented.

## FIRST IN ECONOMY

Firestone Ground Grip Tires give you more traction, more drawbar pull, more riding comfort, more years of service for the same money you would have to pay for ordinary tractor tires. They save 25% in time and up to 33 $\frac{1}{3}$ % in fuel over steel-lugged wheels.

## FIRST IN SALES

Firestone developed the first practical pneumatic tractor tire and put the farm on rubber. Therefore, it is only natural that Firestone should know more about building tractor tires. When you buy a new tractor or any wheeled farm implement, insist that it be equipped with Firestone Ground Grip Tires.



**TRIPLE-BRACED  
TRACTION BARS**  
DO NOT BEND, BREAK OR  
TEAR OFF.

**TRIPLE-BRACED  
TRACTION BARS**  
PREVENT MUD TRAPS,  
RIDE SMOOTHER AND  
WEAR LONGER.

**TRIPLE-BRACED  
TRACTION BARS**  
PROVIDE 52 TO 89 EXTRA  
INCHES OF CONTINUOUS  
TRACTION BAR LENGTH.

**TRIPLE-BRACED  
TRACTION BARS**  
GIVE GREATER TRACTION  
AND DRAWBAR PULL.

**BRACED TRACTION BARS  
ALWAYS GRIP!**  
\*\*\*  
**BROKEN TRACTION BARS  
BEND AND SLIP!**

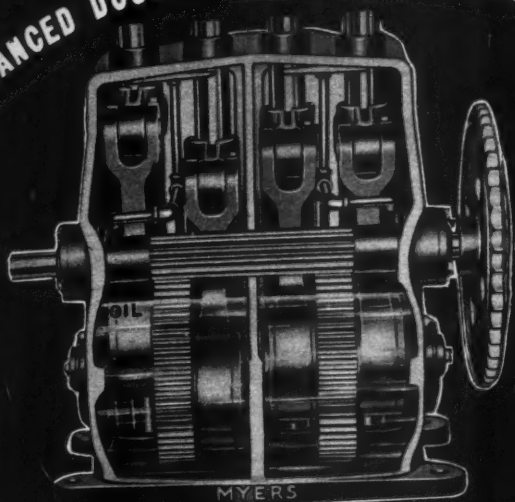
*Listen to the Voice of Firestone  
with Richard Crooks, Margaret  
Speaks and the Firestone  
Symphony Orchestra, under the  
direction of Alfred Wallenstein,  
Monday evenings, over N. B. C.  
Red Network.*

### MAIL THIS COUPON TODAY

The Firestone Tire & Rubber Co., Akron, Ohio  
Without obligation on my part, please send me (check  
below):  
☐ Information about the Firestone Farm Tire Payment  
Plan.  
☐ Full details on changing over my farm wagon or  
spreader.  
☐ Please demonstrate Firestone Ground Grip Tires  
with my own tractor on my own farm.  
Make and model of tractor.....  
Please demonstrate on..... (date)  
Name.....  
R. F. D. or Street Number.....  
Town.....  
County..... State.....



BALANCED DOUBLE GEAR CONSTRUCTION



THIS  
Plus  
THIS

New MYERS  
SILVER SPRAY  
POWER GUN

- Light to Handle
- Trigger Control

WIDE SPRAY

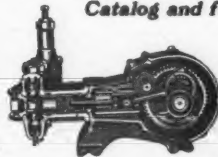
LONG DISTANCE

## Improved Performance and Greater Reliability

You're ready for the toughest schedules when you bring the speed and stamina of a Myers Silver Cloud Power Sprayer to your orchard job. And when your Silver Cloud is equipped with Myers new Silver Spray Power Gun, you've got an unequalled combination of fighting equipment. . . . Here's a gun that's new in design and construction—new in features and performance—the improved gun you need for high-pressure, big capacity work! Light, yet strong. Hand-fitting pistol grip, convenient adjusting handle, responsive trigger control, instant finger-trip shut-off. Easy to hold, point and operate. Quality built—thoroughly dependable!

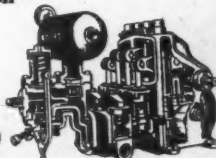
And see how famous Myers dependability is built into heavy duty power pumps. Massive double gears and perfectly balanced construction. Equalized load distribution. Complete self-lubrication. Here's equipment that assures real economy over the years! Backed by dependable dealer service.

Mail the coupon today for free Spray Pump  
Catalog and full information



Bulldozer  
Self-Oiling  
Pumps

Vertical  
Self-Oiling  
Pumps



# MYERS

Spray Pumps for EVERY PURPOSE

### THE WORLD'S LARGEST LINE

Myers famous Silver Cloud Sprayers with steel or rubber tired wheels come in types and sizes for every orchard, field or row crop need. Operation by gasoline engine or power from tractor. Pressures up to 800 pounds.



THE F. E. MYERS & BRO. CO.

593 Orange Street Ashland, Ohio

Send your free Spray Catalog and Guide, full information on items checked and name of your nearest dealer.

Orchard Sprayers	<input type="checkbox"/>	Pump Jacks	<input type="checkbox"/>
Row Crop Sprayers	<input type="checkbox"/>	Water Systems	<input type="checkbox"/>
Hand Sprayers	<input type="checkbox"/>	Sump Pumps	<input type="checkbox"/>
Power Pumps	<input type="checkbox"/>	Centrifugal Pumps	<input type="checkbox"/>
Hand Pumps	<input type="checkbox"/>	Door Hangers	<input type="checkbox"/>
Hay Unloading Tools	<input type="checkbox"/>		

Name

Address

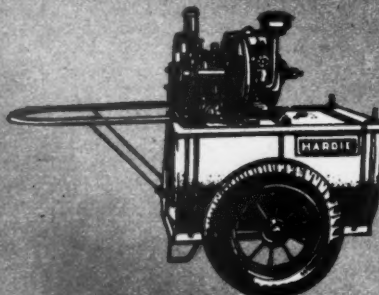
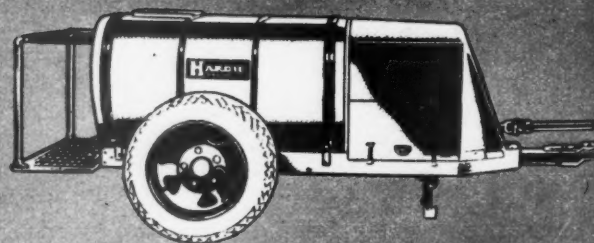
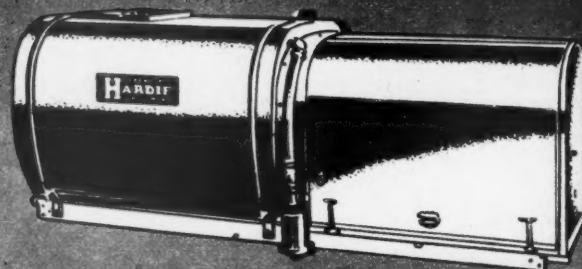
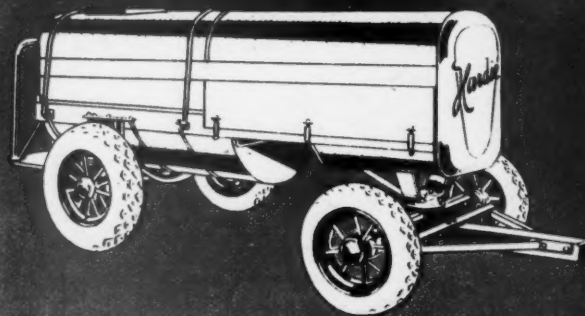
# HARDIE *Plus* FEATURES ARE LIKE THE CREAM IN YOUR COFFEE



You can spray with anything that will pump liquid through a nozzle, but when you spray with a Hardie added features and refinements make the job easier, more economical and the results far more certain. The bigger, stronger Hardie pump, the Hardie vertical crankshaft drive and long connecting rods, Hardie complete lubrication, slow operating speed, easy accessibility of all parts, complete dust proofing and responsible, nearby service facilities are extras which do not cost you extra but save you money, time and trouble.

## 7 PLUS Features

Before you buy a sprayer compare it with a Hardie of equal rating and see what Hardie plus features mean to you. Write for catalog showing streamlined portables in a wide range of sizes and models, Tractor Trailers and motor truck mounted outfits in all sizes, a complete line of small, low-priced power outfits for small acreages. The Hardie Mfg. Company, Hudson, Mich., Portland, Ore., Los Angeles, Calif.



# HARDIE

*Dependable*  
**SPRAYERS**

"THE ONLY SPRAY PUMP THAT IS COMPLETELY LUBRICATED"





# GENICIDE

**THE HIGH SPEED KILLER  
THAT SOLVES  
THE RESIDUE PROBLEM**

## A FEW IMPORTANT GENICIDE ADVANTAGES

- ✓ Solves the residue problem and makes expensive, complicated washing programs unnecessary.
- ✓ Steps up the market value of the crop by increasing the percentage of clean fruit and premium grades.
- ✓ Simplifies handling of the crop due to reduction in percentage of culls.

GENICIDE *does not* contain ARSENIC, LEAD, FLUORINE, NICOTINE, PYRETHRUM, ROTENONE.

**GENICIDE**

THE HIGH SPEED KILLER  
THAT SOLVES THE  
RESIDUE PROBLEM



**SEND FOR THIS FOLDER TODAY!**

It gives complete details on GENICIDE, the insecticide that sets a new "high" in worm control.

**A CONSENSUS AMONG GROWERS WHO  
HAVE USED GENICIDE EMPHASIZES  
THESE IMPORTANT FACTS:**



**CONTROL EFFICIENCY:** Where GENICIDE schedule was used, growers generally noted a marked decrease in stings and worm entries.

**SPRAY RESULTS:** Orchards using GENICIDE schedule, instead of full lead arsenate, lead arsenate-oil, or lead arsenate-nicotine mixtures showed lowest worm injury and good foliage.

## PACKING HOUSE RESULTS

**RESIDUE REMOVAL:** Spray residue was easily removed where GENICIDE spray program was used.

**CULLS:** GENICIDE program showed lowest percentage of culls!

**GRADING:** GENICIDE-sprayed blocks showed highest pack-outs of top grade fruit.

**PACKING:** GENICIDE-sprayed fruit was handled at minimum cost, due to low percentage of culls and ease of cleaning.

## GENERAL CHEMICAL COMPANY

40 RECTOR STREET, NEW YORK, N. Y.

*Sales Offices:* Atlanta • Baltimore • Boston • Buffalo • Charlotte (N. C.) • Chicago • Cleveland • Denver • Houston • Kalamazoo • Kansas City • Milwaukee • Minneapolis • Newark (N. J.) • New York • Philadelphia • Pittsburgh • Providence (R. I.) • St. Louis • Utica (N. Y.)

*Pacific Coast Sales Offices:* San Francisco • Los Angeles

*Pacific Northwest Sales Offices:* Wenatchee (Wash.) • Yakima (Wash.)

*In Canada:* The Nichols Chemical Company, Limited • Montreal • Toronto • Vancouver

GENERAL CHEMICAL COMPANY, Dept. AFG-141  
40 RECTOR STREET, NEW YORK, N. Y.

Gentlemen: Kindly send me without obligation a copy of your folder "GENICIDE, the High Speed Killer for Codling Moth Control."

NAME \_\_\_\_\_

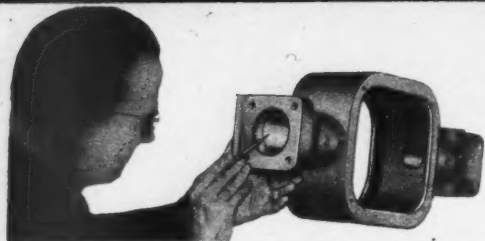
ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_

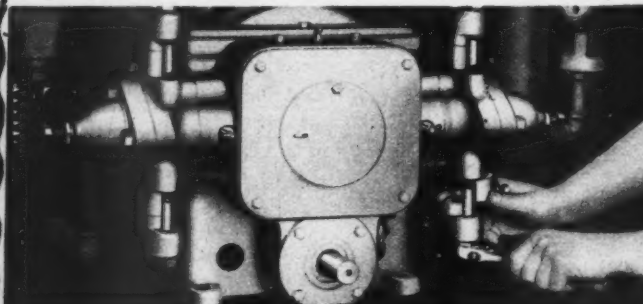
STATE \_\_\_\_\_

# FACTS

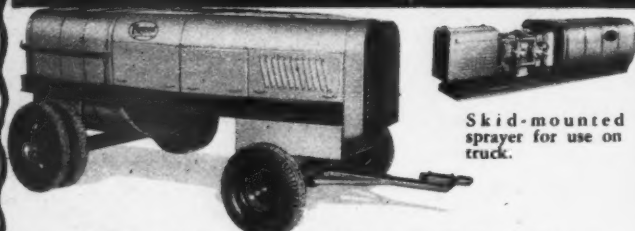
about the  
**Most Reliable  
Sprayer** your money  
can buy



**NO WEAR WHATEVER** on the Cylinder Walls, even after years of use, because the plungers do not touch. No porcelain or other lining is needed.



Valves and Controller are outside, easy to get at for cleaning. Valves have threadless seats—can be taken out instantly without special tools.



Skid-mounted sprayer for use on truck.

All Chassis Styles—Streamlined or Without Covers. At left is the Cutunder style, originated by "Friend."

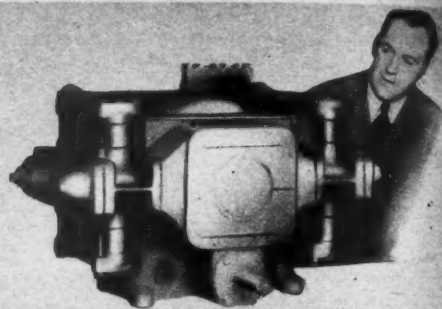


*Fruit growers who have "tried them all" tell you that nothing else compares with a "Friend" Sprayer for*

**MOST SATISFACTION  
and LEAST TROUBLE**

# "FRIEND"

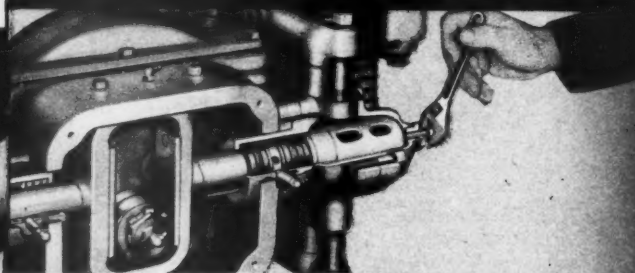
**SPRAYERS · DUSTERS  
FRUIT SIZERS & CLEANERS**



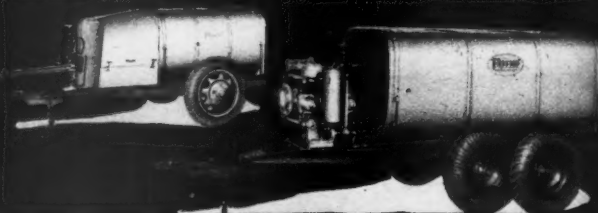
It has the **SIMPLEST PUMP** you will find on any high-pressure sprayer—only  $\frac{1}{2}$  to  $\frac{1}{3}$  as many moving parts. Which saves you *plenty* in upkeep expense!



**TIMKEN BEARING EQUIPPED**, assuring you of greatest possible Dependability. No plain bearings anywhere on a "Friend."



Packing is adjusted instantly—without even stopping the pump. Your "Friend" is the one sprayer which is always working at highest efficiency.



Tractor-Trailers, Streamlined or Without Covers. At right: "Friend" patented Twin Wheel design, for rough ground.

Get the "Friend" Catalog—and read reports from growers who have used several different makes of sprayers.

Also a clear description of the "Friend" Pump—and latest chassis styles.

**MAIL THE COUPON**

"FRIEND" MFG. CO., Gasport, N. Y.

Send your 1941 Sprayer Catalog, explaining the "Friend" pump and showing all types of mountings, to

Name .....

Address .....

(I have.....acres of.....)

(Kinds of fruit)



JANUARY,

VOL. 61

1941

No. 1

# AMERICAN FRUIT GROWER

The  
NATIONAL FRUIT MAGAZINE

## CONTENTS

Cover—A bird's-eye view of a citrus grove in California. Photograph by "Dick" Whittington.	
4-Leaf Clover System of Pruning	9
By Norman F. Childers	
Keep Orchard Records	10
By Robert C. Simpson	
A Practical Lesson in Roadside Marketing	12
By A. M. Musser	
Uncle Sam Boasts Most Dates	13
By Andrew R. Boone	
In Focus at the Illinois and Indiana State Meetings	14
American Pomological Society	16
A Page Conducted in the Interests of the Society	
State News	18
Camera Glimpses	30, 32
Calendar of Coming Meetings and Exhibits	34
Handling Black Walnut Kernels	36
New Time and Money Savers	37
By Handy Andy	
Roadside Marketing	38

### AMERICAN FRUIT GROWER

Published Monthly by  
AMERICAN FRUIT GROWER PUBLISHING CO.  
1370 Ontario St., Cleveland, O.

E. G. K. MEISTER  
Publisher

DEAN HALLIDAY Managing Editor	DR. J. H. GOURLEY Associate Editor
E. A. KRAUSE Associate Editor	RICHARD T. MEISTER Field Editor
MARY LEE ADAMS Home Economics Editor	T. J. TALBERT Contributing Editor

EDWARD MEISTER, JR.  
Advertising Manager.

BRANCH OFFICES—NEW YORK CITY, Room 1212,  
30 Rockefeller Plaza. Phone—Circle 7-1863.  
REPRESENTATIVES—J. C. BILLINGSLEA CO., 123  
W. Madison St., Chicago, Ill. Phone—Central  
0465.

#### SUBSCRIPTION RATES

Domestic Except Cleveland, 3 years \$1.00. 1 yr. 50c.  
Cleveland, Canada and foreign \$1.00 per year.  
Single Copy, 10 Cents.

[1941]



LIBRARY  
DEL. AGR. EXP. STATION

## TO THE EARTH'S ACCOUNT . . .

ONE of the significant shifts in orchard practice during the past quarter century has been the abandonment of intensive "thorough" tillage of the soil in apple and pear orchards. To a somewhat less degree this applies to other fruits as well. It is for "the land's sake" that this change has come about.

Prominent in the replacement of cultivation is that of the mulch system. Outstanding in new information regarding this practice is the fact that potassium (potash) accumulates in large amounts beneath an old mulch—sometimes to a depth of two or three feet—even though no potash is applied as a fertilizer. It is removed from the straw or litter by rains and snows. Calcium, likewise, is much higher in the surface six inches under mulches. And now, for the first time, we are obtaining evidence that phosphorus also is removed from the mulch material and accumulates in the soil.

All this is a matter of first importance on the Coastal Plain Soils and, indeed, in many other fruit growing sections of North America, and represents an important contribution to our knowledge.

## GROWERS ADD INTEREST TO MICHIGAN MEETING . . .

HATS OFF to Don Hootman, secretary of the Michigan State Horticultural Society. When planning the program for the recent annual meeting it occurred to him that a "personal appearance" performance by a few growers themselves—and some remarks right off their chests—would put pep into the proceedings. It did, and in great style, too! The growers who appeared on the platform had something of real value to say, and they said it well. Victor Nicols gave a mighty interesting talk on the labor problem, George Farley gave a significant report on the new harvest sprays, H. G. Willabee told of his experience with the new nitro spray, interesting cold facts about ice bunker storage were presented by J. A. Richards and Arnold Schaefer, while Phil Klenk, a pioneer in mechanical refrigeration on the fruit farm, gave some startling figures on the cost per bushel of storing fruit. Talks by Eugene Heuser, George Friday, Ray Porter, Carl Steimle, Ransom Braman, William Teichman, William Zech, John Davidson, Russell Evarts and W. B. Davis also featured the annual meeting. . . . Putting growers on the program is a fine idea, the Washington State society is also doing it effectively. Other state secretaries please copy.

BEST WISHES for a Fruitful and Prosperous New Year!

LIBRARY  
DEL. AGR. EXP. STATION

bound  
Oct.  
1943

# SEE THE NEW INTERNATIONAL TRUCKS!



The new International Model K-2 pickup.

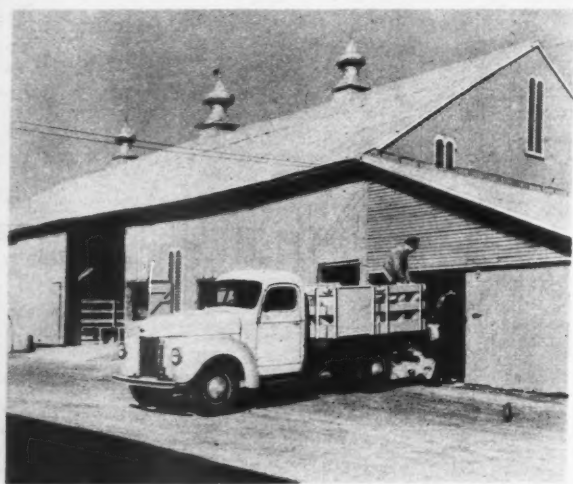
## Distinctive Design—New Fuel Economy

In every modern line and every detail of advance engineering these great new International Trucks tell you their own story. New power and speed . . . new strength and endurance . . . new performance and economy . . . the *New K-Line Internationals!*

Here is an ultra-modern product superbly qualified to advance the high reputation for performance that International Trucks have maintained for over thirty years. As always, the new Internationals are all-truck trucks, built better than ever to give you *better* trucking service at *lower* cost.

The new Internationals bring you new double-anchor hydraulic brakes, sealed-beam headlights, longer easy-riding springs, safety glass throughout, a new all-steel Safety Comfort-Cab, and many other features.

Ask the International Dealer or Branch to demonstrate these trucks to your full satisfaction. Meanwhile, write for a catalog.



The new International Model K-3 with stake body.

**INTERNATIONAL HARVESTER COMPANY**

180 North Michigan Avenue

Chicago, Illinois

# INTERNATIONAL TRUCKS

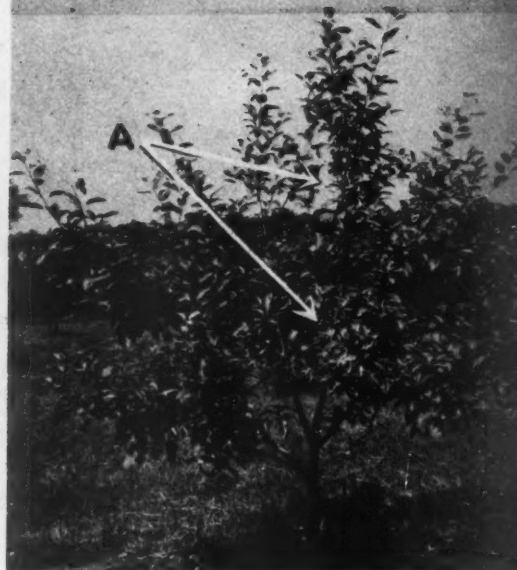




A nine-year-old McIntosh tree trained to the Four-Leaf Clover System from time of planting. Each of the four main limbs comprise an individual quarter of the tree.

# 4-LEAF CLOVER SYSTEM OF PRUNING

By NORMAN F. CHILDERS  
Ohio State University



## TREE TRAINED INTO FOUR QUARTERS

The system of pruning described in the following article is presented because of its possible interest to fruit growers who are making a special study of pruning problems or who may desire to try the method on a small scale. In some respects the system is not in accord with popular conventional methods of pruning.—Editors.

IN northeastern Ohio near Geneva considerable interest has developed regarding a system for training and pruning fruit trees known locally as "The Four-Leaf Clover System." This method of pruning was conceived by W. T. Mann and L. G. Dean of the Grand River Orchards Company, where it has been in use on a commercial scale for the past 10 or 11 years. Because of certain advantages of this method of pruning over conventional methods, and also because of the fact that it has been used successfully for a period of years by one of the largest orchards in Ohio, it would appear to be worthy of mention.

The Four-Leaf Clover System of pruning differs from conventional systems in two main respects. First, the tree is trained into four distinct quarters by holding open as the tree develops two channels one and one-half to two feet wide through the center of the tree, one channel run-

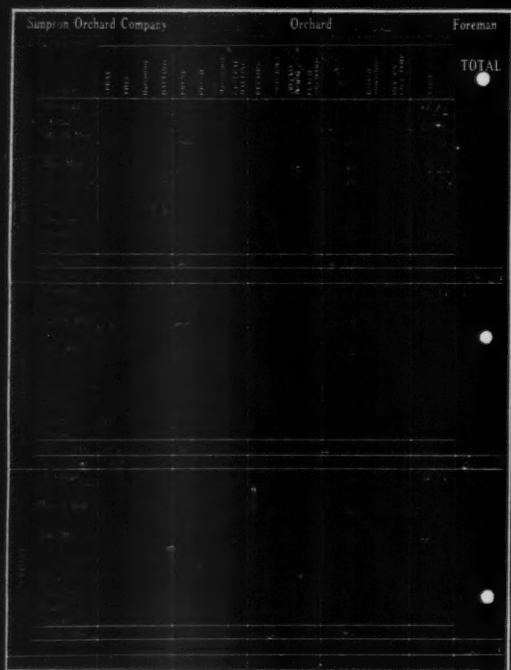
ning from east to west and the other from north to south; and second, the tree is held within a spread of 20 to 22 feet and a height of 16 to 18 feet by more or less annual trimming.

While the idea of opening holes in the sides of trees and holding the height and spread within bounds is not new, the system by which it is carried out by these growers probably is more systematized and simplified than most growers go about  
(Continued on page 17)

Right, top—A Cortland tree being trained according to the Four-Leaf Clover System. The purpose has been to space the limbs around the trunk and to maintain an open vertical channel through the center of the tree at "A". This winter shoots which have grown into this channel will be removed, clipped or trained to the side.

Right, center—Photograph of the same Cortland tree as shown above, taken at a right angle to the first view. The two upright center limbs shown in this view have also been trained to allow for an open vertical channel through the center of the tree. Thus, the tree is divided into four equal quarters.

Right—A Wealthy tree converted to the Four-Leaf Clover System. Because of the central trunk, it was impossible to open two channels at right angles through the center of the tree. Instead, the tree was divided into equal quarters by opening four wedges to the center.



At the close of each harvest season, a careful analysis should be made of the year just past. It is very easy to forget many of the lessons learned by

PAGE 16

- the time another season gets really under way. For such an analysis, the grower should be able to answer the questions of "which, where, when and how": which trees have been boarders; where certain special treatments were applied; on what date certain insects or diseases first appeared; how the spray schedule was varied to meet particular conditions. Too often these items seem easy to remember at the time—and later are difficult to recall with absolute accu-

**AMERICAN FRUIT GROWER**

SIMPSON ORCHARDS COMPANY

Almost every grower has some sys-



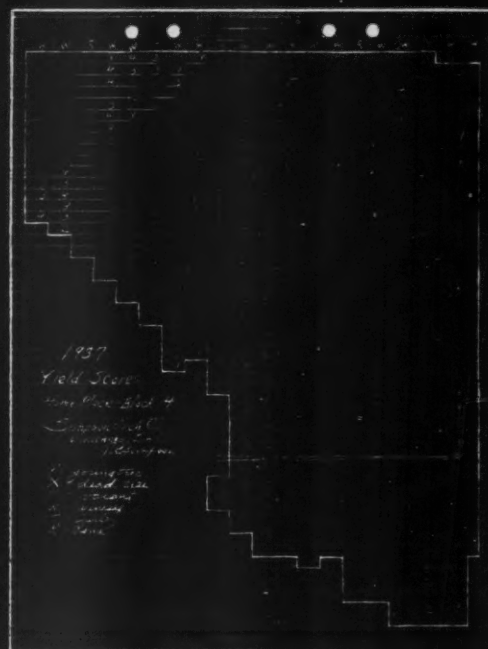
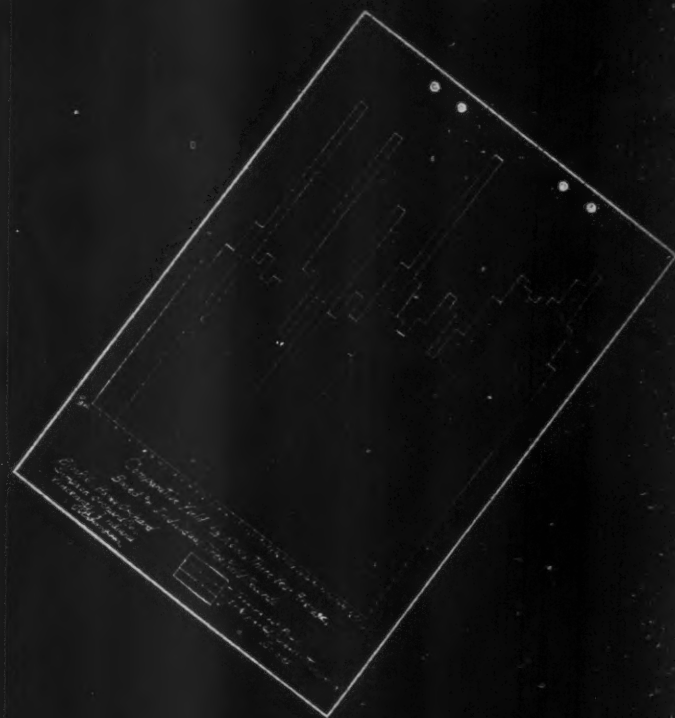
# HARD RECORDS

## ORCHARD COMPANY SPRAY RECORD

DATE \_\_\_\_\_ to \_\_\_\_\_

- ← Direction of wind
- Part of tree sprayed best
- Clear
- Partly cloudy
- Cloudy
- Rain
- Thunder showers

SIMPSON ORCHARD CO.  
OAKLAND ORCHARD  
JAN 1 1922



Center—Spray record chart on which is recorded spraying information. It is also used for recording trees given special treatment, location of tile or stationary sprayer pipe lines and indicating trees for removal or replanting. It is useful in making calculations involving numbers of trees of certain varieties.

Upper left—Data are recorded on this tree record tag by use of a punch. Space is provided for yield records of five years, with scores, respectively, of: High, Good, Fair, Poor, Zero.

Lower left—Sample sheet of labor record. Data as to spray materials and costs are recorded on the printed spray record chart.

Upper right—Chart prepared from three-year record on a block of Transparent trees, in a study of the effect of interplanted Duchess.

Lower right—Individual tree yield record. Copy of production records of one block of mature apple trees. The chart has been partially filled in as would be the case where Winesap trees had been partially scored, with Rome not ready for scoring. The outline of the block was taken from the spray record chart and filled in as the rows were scored. A system of numbers is used to indicate relative rather than actual production because a given number of bushels of fruit might be a good yield for one tree but only a fair yield for another of larger size.

allotted to various orchard operations.

### Diary

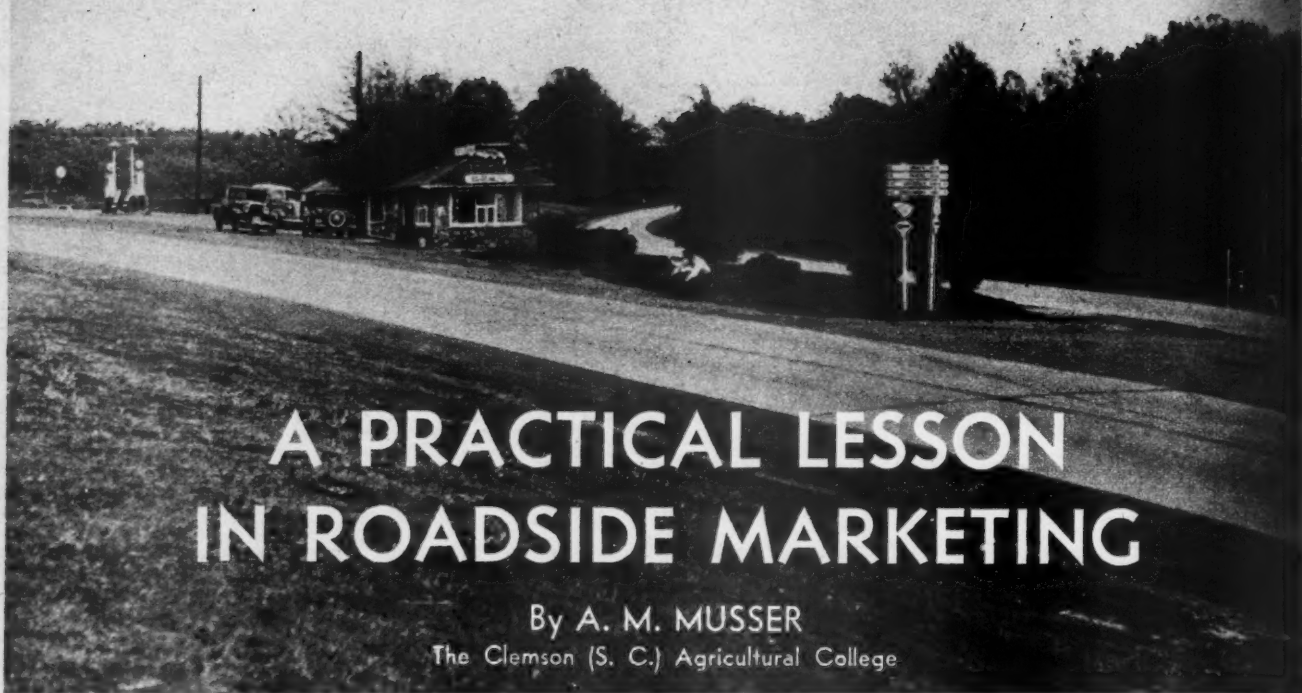
One of the most valuable types of orchard records is the diary. Only a few minutes daily are required to keep this record. The diary should consist of daily notations of important work started or completed and anything unusual or new for the season. Notations as to weather conditions, or stage of development of fruits at a given date, may be of definite value the following year. The success or failure of some special treatment or operation may be directly related to conditions at the time of initiation, though perhaps results are not apparent until months later.

In checking back through notes of  
(Continued on page 24)

tem of costs. These may be relatively simple or quite detailed, according to the information needed. There are two items of cost, however, which are frequently neglected in calculating unit cost of production. Many growers fail to include a charge for their

own labor and that of members of their family. Charges for full overhead and depreciation often are not included.

In a study of production costs, labor records should be kept in such manner that hours and costs may be



# A PRACTICAL LESSON IN ROADSIDE MARKETING

By A. M. MUSSER

The Clemson (S. C.) Agricultural College

**DEAR MR. FRUIT GROWER:** As you will note in the picture, this roadside market at Clemson, S.C., is located in the fork of two roads. The road to the left of the market is Highway No. 13 from Washington, D.C., Charlotte, N.C., to Atlanta, Ga., and New Orleans, La., and is a rather heavily traveled road. The road to the right leads to Anderson, 18 miles away, which has a population of about 15,000. One can go by this road to Atlanta via Athens and several other towns in Georgia. Clemson is located about equidistant—137 miles—from Atlanta, Ga., Charlotte, N.C., and Columbia, S.C.

This market has been established at this location since 1927 and we have quite a number of customers from as far away as Charlotte and Atlanta. Greenville, with a population of about 70,000 people, is 30 miles northeast, and of course there are numerous small towns within a 50-mile radius.

All the area between both roads and the market building, except the lawn which is on three sides of the building, is surface treated, and since both roads are paved, we are not bothered with dust at any time. We have sufficient parking space, counting both sides of the fruit house, for about 40 cars. However, by parking on the opposite side of the road, additional cars could be accommodated. The filling station, of which several pumps can be seen to the left of the picture, is run for the benefit of the Athletic Department. The orchard in the background is one of our experimental blocks of peaches. Our largest block of peaches is located on the other side of the line of trees to the right of the picture.

We do not keep this market open after dark unless a good many customers are present at that time. We have one light inside the building. Some years ago, soon after it was established, we kept the market open until 10:00 o'clock during two summers and had lights on the roof which illuminated the signs at either end and on top of the building. However, we found that after 7:30 or 8:00 o'clock we had very few customers except on occasional nights and since then we have not kept the market open that late.

When the weather is sufficiently warm, the shutters which serve to close the market at night, are opened, thus providing the occupants of approaching cars with a full view of the display of fruits. These shutters open to the inside of the building and are held in place with chains. When

the weather is colder, we have one big window which fits in each opening and in this large window are two smaller hinged windows which are opened for the convenience of the purchaser when selecting fruit or buying dairy products.

The building, which is constructed of field stone and is 10 by 20 feet in size, cost us about \$300 when it was constructed. Since that time it has needed but few repairs with the exception of a new roof of asbestos shingles which was put on last year. The building is painted every year. Trash cans are provided for refuse.

One of the greatest factors in regard to the location of this Roadside Market is that no matter from which direction the motorist approaches he passes orchards or vineyards, and I believe this is a very important factor. The people traveling these roads see the orchards or vineyards before the market comes into view and when the fruit is ripening it looks very attractive and immediately there is a desire on the part of many of these people to purchase some fruit. Then, too, when the market is located in the midst of the orchards and vineyards, customers are more apt to know or think that the fruit sold at the market is also grown here and that it is not a market for the purpose of selling shipped-in fruits and vegetables.

Both horticultural and dairy products are sold at our market. Total sales for horticultural products most years run between \$6500 and \$8500, while sales of dairy products run between \$4500 and \$6000. This is for the season beginning April 1 and extending to December 15. One winter we kept the market open until the first of March in order to sell a particularly large apple crop. In 1940 we had a rather small apple crop and closed the market the middle of November.

The Horticultural Department of Clemson College has charge of about 55 acres.

The letter from A. M. Musser herewith sets forth his roadside marketing experiences in such practical detail that we urge growers to read every word in the hope of being able to adopt some of the ideas profitably, either now or in the future.—Editors.

We have many varieties of peaches, apples, grapes, plums, pecans, raspberries, dewberries, apple cider, fresh grape juice, etc., for sale at our market, all of which comes from our experimental orchards. As far as the market is concerned, peaches and grapes are the most popular crops because when allowed to ripen on the plant and when not subjected to several days or weeks of shipping, these fruits have better flavor and quality than they otherwise would have.

This market is an excellent place to determine whether the different varieties of fruits will take well with the public. For instance, with our many varieties of peaches we find a great many people prefer certain of the yellow or white fleshed varieties. The Cumberland peach, which is highly colored on the sunny side, white fleshed and sizes up well, is an excellent variety for our market. It sells practically as well as the Georgia Belle, which is one of our very best white fleshed peaches. The Oriole, a round, yellow fleshed variety, which is too tender to be shipped, makes an excellent display on our counter and since it has high quality in addition to excellent color, simply by displaying it insures its sale. The same thing can be said of the Halehaven, Fay, Golden Jubilee and others. Quite a number of our customers will not buy Elbertas for canning if they can obtain such varieties as South Haven, Halehaven, Vedette, Valiant, Halberta and Early Elberta. The sale of raspberries and dewberries is rather limited because customers do not buy these highly perishable fruits to carry long distances.

We usually have 100 to 115 or more varieties of peaches in our orchard, around 40 to 70 varieties of apples and from 15 to 40 or more varieties of grapes. This, of course, gives us a long harvesting

(Continued on page 38)





## UNCLE SAM BOASTS MOST DATES

By ANDREW R. BOONE

**T**HIRTY-SIX years ago California's Coachella Valley was a torrid waste. Last year, 2000 of the valley's fertile acres produced 11,000,000 pounds of dates, biggest crop in the nation's date-growing history. Many of the orchards lie below sea level and virtually no rain falls on their sands. Yet agriculture and science combined have caused these orchards to become the world's biggest producers, and the quality of their fruit knows no foreign rivals.

First dates were planted at Mecca, Calif., in 1904, after Dr. Walter T. Swingle, U.S.D.A. explorer, had shipped several-score offshoots of African palms to this country. Those

offshoots took root and thrived, and their numbers increased until today more than 150,000 palms have come into bearing or soon will. They represent  
(Continued on page 29)

Above, left—California's torrid Coachella Valley in 1940 produced the biggest crop of dates in its history.

Above, right—To reproduce varieties, offshoots are separated from parents and planted. Bernice Cox is shown standing between parent and offshoot.

Right—Dates begin to ripen in late September. Picking commences at this time, continues through the winter.

Below, right—Since rainfall is disastrous to dates, each bunch is covered with a sheet of waterproof paper.

Below—Nimble fingers quickly sort the desert sweets, tossing culls aside.



# IN FOCUS

AT THE  
ILLINOIS  
AND  
INDIANA  
STATE MEETINGS



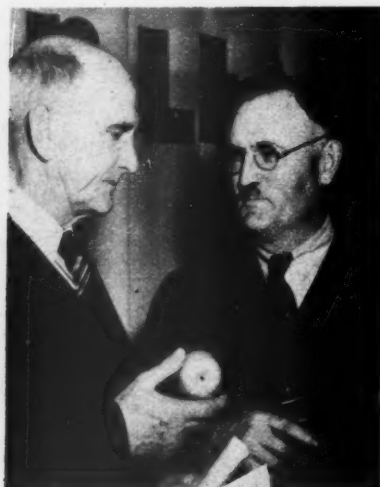
Principals at opening session of 85th annual convention of the Illinois State Horticultural Society at Belleville, left to right: C. H. Eckert, Turkey Hill; Joe B. Hale, secretary, Kell; Oliver C. Joseph; O. G. Jones, president, Mt. Sterling; L. F. Dintelman, Belleville.



Fred Blackburn, Illinois farm advisor, left, with C. Boyd Cobden.



Charles Ringhausen, Jerseyville, Ill., left, with Thomas S. Smith, Chicago.



Robert A. Simpson, Vincennes, Ind., left, and V. V. Clarke, Bristol, Ind.



Brother fruit growers, L. V. Dood, left, and W. W. of Denver, Ind.

## American Fruit Grower Photographs



Frank Chatten, Quincy, Ill., left, receiving a few "pointers" from G. Leslie Smith, Rock Island.



Top, left to right—Illinois growers Nelson Cummins, Dix; Witt Venerable, Cobden; L. M. Smith, treasurer, Ozark. Below—Earl Byers, Vincennes, Ind., center, with his two sons, Mark, left, and Robert.



Principal speaker at Illinois meeting was Dr. W. A. Ruth, pomologist, University of Illinois, Urbana.



*Killer  
Many Insects*

## BLACK LEAF 40

Whether you use Black Leaf 40 to control green or rosy aphids; nymphs of leafhoppers, red bugs, pear psylla; newly-hatched codling moth or bud moth larvae; or adult codling moths, you will find it dependable, uniform, convenient. "Contact-action" gets results when these destructive insects attack your profits. Black Leaf 40 is a reliable, versatile insecticide to use with other sprays, and kills many insects in the orchard, garden and poultry house.

TOBACCO BY-PRODUCTS & CHEMICAL CORP.  
INCORPORATED  
LOUISVILLE, KENTUCKY

**"Black  
Leaf"**



# APS

A PAGE CONDUCTED IN THE  
INTERESTS OF THE AMERICAN  
POMOLOGICAL SOCIETY

## FRUIT MARKETING WILL BE THEME OF ANNUAL CONVENTION

**T**HE joint conventions of the American Pomological Society and the Fruit Growers' Association of Ontario, to be held at Hamilton, Ontario, January 15-17, 1941, will bring together a notable group of horticulturists from both Canada and the United States. The opening discussion will deal with fruit breeding and new varieties recently introduced. These discussions will be led by Dr. M. B. Davis, Dominion horticulturist of Ottawa; Dr. E. F. Palmer, director, Ontario Fruit Experiment Station, Vineland, Ontario; and H. L. Lantz, Pomology Subsection, Iowa Agricultural Experiment Station, Ames. These men have long been identified with work in fruit breeding and their discussions dealing with the variety question should be of extreme interest. An exhibit of new varieties will be a feature of these discussions.

The most important discussions will be those dealing with marketing. The European situation has shut off exports to all of Europe and post-war impoverishment will likely mean a long period of restricted exports to Europe. This can mean only one thing: Canada, which normally exports a large percentage of the apple crop, and the United States, which exports 10 to 20 per cent of the crop, must in some way work out adjustments that will preserve the fruit industry in North America.

In a letter received the other day from C. E. Chase, secretary-manager of the Washington State Apple Advertising Commission, he states that apples and pears from Argentina are produced at a cost, delivered to the packing house, of eight to 12 cents per box, and that "the entire cost of production, packing and transportation to New York runs well under 70 cents per box." Furthermore, Chile, Tasmania and New Zealand are also seeking markets for their fruit in North America. Marketing is a problem!

### ANNUAL CONVENTION

*Hamilton, Ontario, Canada—*

*January 15-17, 1941*

Arrangements have just been completed by which the annual convention of the American Pomological Society is to meet in joint session with the Fruit Growers' Association of Ontario. The date is January 15-17, 1941, and the place is Hamilton, Ontario, Canada.

The central theme is Marketing. Able speakers from both Canada and the United States have been secured for this important three-day program. The Fruit Growers' Association of Ontario is one of the strongest horticultural organizations on the continent, and this, in itself, is your assurance that it is quite worth-while to make an extra effort to attend. We hope that a goodly number of growers from the United States will join with us in this, the 56th convention of the American Pomological Society and in this way express our appreciation to our neighbors in Ontario for their kind invitation to join with them in this meeting.

The program at the Hamilton meeting will bring together leading opinions from officials of the two governments and from growers.

"Putting Fruit Trees on the Right Roots and Framework" will be discussed by T. J. Maney, head, Pomology Subsection, Iowa Agricultural Experiment Station, Ames, and W. H. Upshall, Vineland, Ontario. An out-of-season freeze in the Missouri Valley region of the Middle West, which occurred during the week of November 11, killed thousands of trees outright. The whole orchard industry of this area appears to have suffered a major disaster. A bright spot in the picture is that those orchards which were top-worked on hardy stocks came through with comparatively little damage. Hardy stocks have engaged the serious attention of orchardists for the past five years. This and other freezes have focused attention of growers and of-

ficial horticulturists on the importance of the stocks question.

The general program will deal with many horticultural problems. Stanley Johnston, superintendent, South Haven (Mich.) Experiment Station, will discuss, "Solving the Small Fruit Problems of the Great Lakes Region." Dr. J. H. Gourley, head, Department of Horticulture, Ohio State University, Columbus, will deal with, "Soil Treatment Experiments with Orchard Fruits." "Improving the Market Quality of Peaches and the Trees," is the subject of an address by Dr. M. J. Dorsey, head, Department of Horticulture, University of Illinois, Urbana.

A number of leading growers and official horticulturists and market specialists from Canada will participate in the program, but at this writing, their subjects have not reached this office.

We feel that the entire program is one of unusual interest and fruit growers are especially urged to make a special effort to attend. We hope the United States will be well represented.

*H. L. Lantz*  
SECRETARY

### MEMBERSHIPS

It is time NOW to apply for a 1941 membership in the APS. You will receive the annual report of the convention held in Canada, January 15-17, and a year's subscription to AMERICAN FRUIT GROWER. Remit to H. L. Lantz, secretary, Ames, Iowa.

### MISSOURI RIVER APPLE REGION HIT BY NOVEMBER FREEZE

Widespread damage was done to the apple growing industry along the Missouri River in the states of Iowa, Nebraska, Kansas and Missouri by a sharp freeze which occurred November 11-15. A warm fall was followed by three days of rain just prior to November 11. The trees were still in full leaf. Suddenly out of the northwest came near zero and below temperatures which caught trees of all ages unprepared for winter. Bearing trees suffered injury to all parts of the tree, but the damage was especially severe on the trunks and larger limbs. The cambium layer has turned dark brown and the phloem areas are browned, showing an injury which is believed will mean the outright killing of entire orchards. The varieties Grimes, Delicious, Golden Delicious and Winesap suffered the worst damage. Jonathan, the dominant variety of this area, shows somewhat better condition, but thousands of trees of Jonathan now appear to have also suffered irreparable damage.



A 24-year-old McIntosh tree which had received no pruning until its thirteenth year, after which it was gradually converted, over a period of five years, to the Four-Leaf Clover System. These trees are held within a 20 to 22-foot spread and a 16 to 18-foot height. They are grown 50 trees to the acre.

Below, right—Same tree as shown in above illustration but photographed at a right angle to the first view. Each of the four quarters of this tree has somewhat the advantages of a 12-year-old tree from the standpoint of efficiency in spray coverage and ease of thinning, picking and pruning. Fruit has graded 80 to 85 per cent extra fancy.



## 4-LEAF CLOVER SYSTEM OF PRUNING

(Continued from page 9)

the job. The four channels or wedges into the tree are arranged so that they always occur in a definite position, as, for example, on the east, west, north and south sides in line with the rows.

The trees are held within bounds by placing a 10-foot pruning pole against the trunk of the tree beneath each quarter and removing all growth which grows beyond the pole. As the pruner encircles the tree he enters each wedge and removes, clips or cuts toward the side any twigs which are growing into the so-called open channels. After this he climbs an eight-foot step-ladder placed consecutively in each open wedge and removes twigs which are growing upward beyond his reach. Whether or not he per-



Yield of six varieties of apple trees pruned to the Four-Leaf Clover System. (Includes only fruit packed out of storage.) The Grand River Orchards Company, Geneva, Ohio. 1934-39, inclusive. Trees 23 years old in 1939.

Variety and Number of Trees	Yield in bushels per year						Av. Yld. per A.
	1934	1935	1936	1937	1938	1939	
McIntosh (206)	2105.5	5358.5	2062.75	4086.0	3749.5	.....*	842.8
Delicious (213)	1742.25	1805.25	1591.25	1505.75	1638.5	1522.0	386.6
Northern Spy (281)	3671.25	2028.5	2944.75	1330.25	3030.0	202.5	391.7
Rome Beauty (298)**	2301.25	1770.25	1871.25	3043.25	1467.75	2907.5	373.6
Twenty Ounce (126)	1845.0	1907.0	2119.75	1349.0	1328.5	1844.5	687.4
Boiken (188)	1740.5	1619.25	1208.5	1343.5	1437.0	1204.5	379.1

\*Young McIntosh trees came into bearing and yield was pooled with fruit from older trees; no accurate record for older trees.

\*\*Includes about 30 Ensee trees, the fruit from which was pooled with the Rome Beauty.

forms moderate, if any, ordinary detail pruning of branches within each quarter will depend upon the need for it and the prospects for a crop the following summer. This is determined by inspecting the number of fruit buds and the amount of mulch beneath a tree.

If it is evident that the tree was mulched (indicated by depth and freshness of mulch) the past spring, it is taken for granted that it was carrying a relatively heavy crop; if it were not mulched the crop was light. By a system of performing somewhat more trimming preceding years of heavy crops for an individual tree and less trimming preceding years of small crops, Mr. Dean has found it possible to prevent an over-vegetative condition.

The first impression to an outsider who hears of this system of pruning,

(Continued on page 22)

# STATE NEWS

**NEBRASKA**—A grave situation faces Nebraska growers—so grave a situation that it formed the chief topic of discussion at the annual meeting of the Nebraska State Horticultural Society at Lincoln, November 26-28.

The severe storm which struck the Middle West on November 11, dropping the temperature from above freezing down to three below zero, caused great damage to fruit trees and nursery stock. Growers at the meeting felt that the freeze had dealt fruit growing in the Missouri Valley a very serious blow.

Most of the fruit trees still retained their leaves and had not hardened up when the storm occurred. Some growers, in fact, had not completed picking their apples. The result was that the fruit buds and spurs on pears, peaches and late apples were practically all killed. Considerable trunk damage occurred on cherries, peaches and late apples. The extent of the injury, of course, will not be learned until after growth begins in the spring.

Throughout this territory nurserymen lost huge amounts of nursery stock. It was reported that one nurseryman in Iowa suffered a loss of over \$200,000.—E. H. HOPPERT, Sec'y, Lincoln.

**WASHINGTON**—I. A. VanValkenburgh of Wenatchee was elected president of the Washington State Horticultural Association at its 36th annual meeting at Yakima, December 2-4. Other officers elected were Jesse C. Childs of Donald, first vice-president; H. M. Smith of Dryden, second vice-president; and John C. Snyder of Pullman, secretary-treasurer.

The meeting was unusually well attended and an enthusiastic interest was shown in all papers and discussions. Northwest growers apparently are in excellent spirits.

The first paper to be presented concerned Harvest sprays. Growers from all areas are intensely interested in this topic. A number of growers used the hormone material the past season in varying amounts, obtaining varying degrees of success.

W. J. O'Neill described the results of some of the experimental work being done in controlling fruit pests at the Tree Fruit Branch Experiment Station at Wenatchee. One of the points of especial interest to growers was a lime-sulphur-oil combination for control of San Jose scale.

Grower participation in the meeting was an outstanding feature of this year's program. Some of the topics discussed by them concerned problems regarding which certain growers had wide experience and information.

Considerable attention was given to the importance of packing fruit without injury. Clarence Huntley, deputy horticultural inspector at Yakima, pointed out that many of the injuries caused by improper packing were due to improper sizing. He indicated also that in many cases too many apples were placed in the box.

F. A. Motz, principal marketing specialist, Foreign Agricultural Relations, Washington, D. C., discussed in a most interesting manner, "South America, Competitor and Customer." Mr. Motz pointed out that conditions in South America do not lead one to believe that there is a potential market there, for the near future at least. Apples of unusually high quality can be produced in some sections of South America, Motz stated.

The canning of freestone peaches was a topic of special interest during the soft fruit

session. It appears that there is the possibility of developing canned products superior to those now being offered the public.—JOHN C. SNYDER, Sec'y, Pullman.

**KENTUCKY**—Expansion of West Kentucky orchards to help absorb land left idle by the dwindling dark tobacco crop and to provide a cash farm income to take the place of that once derived from tobacco was recommended at the 85th annual meeting of the Kentucky Horticultural Society at Paducah by W. W. Magill, specialist in horticulture at the University of Kentucky.

The process is to revamp the farm program in West Kentucky over the next five years, Magill told growers. He recommended that early variety apples be planted since West Kentucky is favored by climatic conditions which permit the fruit to ripen 10 days earlier than in southern Illinois and other competing areas. Thus West Kentucky growers stand in a favorable position to get good prices. Magill warned growers, however, not to jump into early apple production on a wide scale.

The society re-elected Herman J. Yopp of Paducah president. Fred Van Hoose of Paintsville was elected first vice-president.—TED COOPER, Sec'y, Paducah.

**NEW HAMPSHIRE**—Resolutions endorsing work of the Federal Surplus Marketing Administration, the New York and New England Apple Institute, the soil conservation program and the food stamp plan, and asking the New Hampshire Legislature to provide funds this winter for rodent control work in co-operation with the U. S. Biological Survey, were adopted by the New Hampshire Horticultural Society at its recent two-day 47th annual meeting at Manchester.

Officers were re-elected as follows: President, James W. Elton of Hampton; vice-president, Wallace P. Mack, Jr., of Londonderry; secretary, Alfred L. French of Henniker; and treasurer, Earl W. Young of Temple.

**ARKANSAS**—Due principally to wine and

juice demands, the grape industry here is "looking up" considerably, it was revealed at the annual meeting of the Arkansas State Horticultural Society held at Bentonville, December 3. Only a moderate additional acreage is being planted at present, however.

Lengthy and intensive discussion took place during the meeting in regard to "An Act to regulate the grading, packing, branding and sale of apples, peaches, strawberries and fresh tomatoes; to provide for inspection; and to provide for penalties and violations thereof." A great many fruit growers, especially the larger ones, favor a State grading and labeling law for fresh fruits and vegetables.

Officers elected were as follows: President, Kit Phillips of Gravette; first vice-president, Carl Tromble of Bentonville; second vice-president, E. H. Breedlove of Bentonville; secretary, E. G. Allen of Fayetteville; and treasurer, Thomas Rothrock of Springdale.—THOMAS ROTHROCK, Springdale.

**DELAWARE**—For the first time in the history of the 54-year-old Peninsula Horticultural Society, and probably for the first time in the history of any horticultural society, a woman was elected president of that organization.

Mrs. R. Jane Cunningham, fruit grower of Cambridge, Md., was the woman selected to guide the affairs of the Peninsula society during 1941. Though city born, Mrs. Cunningham successfully manages apple and peach orchards and has established markets for her fancy grade fruit in New York City—her home before coming to Cambridge eight years ago to engage in farming.

William H. Richter, Jr., of Dover, Del., was elected vice-president of the society. Re-elected were W. Lee Allen of Salisbury, treasurer, and T. F. Manns of Newark, secretary.

**MICHIGAN**—That fruit growers themselves are anxious to tell of their orchard experiences, and that their fellow growers are just as anxious to learn of these experiences was



Congratulating Mrs. R. Jane Cunningham, Cambridge, Md., on her election to the presidency of the Peninsula Horticultural Society at its meeting at Dover, Del., are past presidents of the society, left to right, E. R. Dick, Smyrna, Del.; W. Lee Allen, Salisbury, Md.; Warren C. Newton, Bridgeville, Del.; Dr. T. F. Manns, Delaware plant pathologist and secretary of the society.



proved during the Michigan State Horticultural Society annual meeting at Grand Rapids in early December. More than a dozen growers appeared on the program and the attendance at all the sessions was unusually large.

J. A. Richards of Eau Claire and Arnold Schaefer of Sparta, who have added fans and ice bunkers to their air-cooled fruit farm storages, reported that the system worked fine the past season for both peaches and apples. Phil Klenk of Sparta, who has a 17,000-bushel refrigerated storage, told growers that while the first cost of installation of a mechanical unit is high, the cost of storage per bushel of fruit is lower than that in a storage cooled with ice.

Peach growing and marketing experiences were related by W. Zech of Berrien Springs, W. Teichman of Eau Claire and Ransom Braman of Grand Rapids. Zech reported that soil erosion was stopped and his trees produced large, highly colored fruit after he had adopted the sod mulch system of soil management. Teichman told growers that as a cover crop for his peach orchard, quack grass had proved very effective. During the growing season the quack grass is held in check by the tractor-drawn implements used in his orchard. When cultivation ceases, the quack grass comes up. The use of filler peach trees in an apple orchard is bad practice, Braman told growers, because satisfactory spray schedules cannot be worked out.

Out-of-state speakers included Paul Chapman of the New York Agricultural Experiment Station, who spoke on dormant oil sprays, and C. W. Ellenwood of the Ohio Agricultural Experiment Station, whose topics covered the bruising of apples in handling, and operating costs of sprayers.

J. J. Hill of Montrose was chosen president of the society, Henry Bartz of St. Joseph, vice-president; J. A. Richards of Eau Claire, treasurer; H. D. Hootman, secretary.

**PENNSYLVANIA**—On January 21-23 the Pennsylvania State Horticultural Association will hold its annual meeting in the Farm Show Building at Harrisburg.

The cull problem will come up for discussion during the first day of the meeting. In addition, Myron S. Hazen of Milton, N. Y., will cover the subject, "Managing Fruit Soils for Maximum Production." Dr. R. S. Marsh of West Virginia University will speak on, "A Defense Program for Commercial Fruit Growers," and Guy L. Hayman of Northbrook, Pa., will handle the subject, "Culling the Unprofitable Varieties."

Wednesday's program will include a thorough discussion of fruit insect pests and diseases by such authorities as T. L. Guyton of the Bureau of Plant Industry, Harrisburg, Pa.; Dr. B. A. Porter, Federal entomologist; E. M. Stoddard of Connecticut Agricultural Experiment Station; as well as Pennsylvania State College entomologists.

Since by-products are an important outlet for the lower grade fruits, this topic will be covered on Thursday by H. G. Beattie of the New York Agricultural Experiment Station and L. B. Newcomer of Boyertown, Pa. Soil problems will be discussed by Pennsylvania State College authorities.—J. U. RUEF, Sec'y, State College.

**IOWA**—The Iowa State Horticultural Society celebrated its diamond anniversary on November 20-21 in the Memorial Union at Iowa State College, Ames. Attendance at the various meetings, including those of the horticultural society, Iowa Fruit Growers Association, Iowa Beekeepers' Association, the Federated Garden Clubs of Iowa and Iowa Nut Growers, reached a total of over 400.

Elmer Reeves of Waverly was presented with a medal for his 56 years of membership in the society. The first meeting which he attended was held in Dubuque in 1882.

Newly elected officers of the society are  
(Continued on page 36)

JANUARY, 1941

# The Hardest-Working Trucks in America!



**WHENEVER YOU SEE** a hauling job that calls for power and economy — *look closely!* The chances are that a Ford truck is on that job.

By actual registration, *farmers use more Ford Trucks than trucks of any other make.* What does that fact prove? Just this: operators of large and small farms are sold on the *high efficiency at low cost* of Ford hauling equipment.

A powerful, thrifty Ford Truck is a real producer all year 'round! Right now it will help get your farm in shape for spring. Farm machinery, tools and implements needing repairs must be transported. There's wood, coal and fuel to haul. Farm contract hauling is on the increase. This truck will *more* than earn its keep!

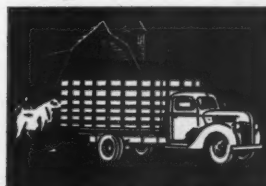
There's a Ford Truck to meet the needs of every American farmer — no matter where he is! There's one for you. Feel free to try it out, without cost, without obligation. Call the Ford Dealer for an "On-YOUR-Job" Test.

★ ★ ★

*Three engines: 95 and 85 hp V-8 — new 30 hp 4-cylinder economy engine for light duty*  
*• Six wheelbases — 42 body and chassis types • Full-floating rear axles in all trucks — ring gear thrust plate • ¾-floating axle in Commercial Cars • Straddle-mounted driving pinion • Big hydraulic brakes.*

# FORD TRUCKS

AND COMMERCIAL CARS



AMERICAN FRUIT GROWER

PAGE 19

# If You Grow



## BASE YOUR SPRAYING PLANS ON SOUND,



**Y**OU know, and we know, that *spraying* is an expensive operation. It can be *vital*ly worth while, or it can be wasteful. You can get *assured results*, or you can throw your money away. It all depends upon *how soundly* you plan your spraying program. A **SOUND PLAN** is necessary whether you grow apples, peaches, cherries or any other fruits requiring spraying.

Lay out a spraying plan; be sure it is sound and as economical as is consistent with good practice—*then stick to it*. Too many growers spray on a hit-and-miss basis. Spray schedules are changed too often without taking into consideration what should be done to meet the worst possible conditions. A new schedule is adopted *just because it is new*, and previous practical experience is ignored.

We stress the sound planning of spraying programs, and we always will, because it is the policy of the Sherwin-Williams Company to recommend only the use of insecticides and fungicides which over a long period of time have proved to be efficient in the control of insects and diseases, and safe from the standpoint of fruit and foliage, as well as economical, discarding all the fancy proprietary concoctions which might be prepared and sold at prices higher than their worth. And Sherwin-Williams will continue this policy.

Consider, for example, Sherwin-Williams Dry Lime-Sulfur. This—the **ORIGINAL DRY LIME-SULFUR**—is stabilized liquid lime-sulfur in dry, powdered form. It is recommended as a dormant spray for apples, peaches, cherries, pears, plums and other fruits for control of San Jose scale and peach leaf curl, and as a summer spray for control of apple and pear scab. It is more effective per unit of sulfur than the sulfur in liquid lime-sulfur and less injurious to apples and apple leaves than ordinary liquid lime-sulfur.

After sound consideration and thorough testing Sherwin-Williams recommends S-W Dinitrol. This is a dry mix combination of dinitro-ortho-cresol for use as a dormant spray with oil emulsions for the control of rosy and green apple aphids, San Jose scale, European red mite, scurfy scale and apple leaf roller. It should be applied to the trees when they are completely dormant.

PAGE 20

Recommended as of special importance to apple and peach growers is Sherwin-Williams Mulsoid-Sulfur, the highest quality wettable sulfur on the market today. It is a microfine wettable sulfur (particle size 3 to 4 microns) recommended especially as a spray for peaches to control brown rot and peach scab, and for spraying apples and pears for the control of scab in the afterbloom sprays.

So far as peaches are concerned, although this is a sectional problem, we have some suggestions to make which we know you will find to be sound. Should you, as a peach grower, choose to dust, don't make the mistake that hundreds of other peach growers have made during the past 10 years, namely, that of dusting with sulfur, arsenate of lead and lime, in the belief that this combination will control brown rot, scab and curculio of peaches without injuring the foliage and new wood, because it won't. Don't make the mistake of expecting lime to neutralize the arsenate of lead in a dust or spray when used on peaches, but play safe by taking advantage of the latest scientific development which Sherwin-Williams offers in the form of Safe-N-Lead. This is a patented zinc compound in convenient form for use with *arsenate* of lead. Use it instead of lime in your dust or spray mixtures, with arsenate of lead, and you will *absolutely prevent* arsenical injury to the foliage of peaches and apples and to new wood of peaches, at the same time obtaining effective control. This is perhaps the most important recent development in the spraying or dusting of peaches and merits the consideration of every grower.

When it comes to spraying sour cherries for the control of leaf spot, we know from long experience that various dilutions of Bordeaux mixture applied heavily to cherry trees will control leaf spot, but in most seasons, particularly in dry ones, proves toxic to leaves and causes damage to the cherry crop in the form of reduced size, off-flavor (bitter) fruit and a reduction in sugar content.

There are various types of so-called insoluble copper compounds offered for spraying cherries, but the one which has been tested most successfully is **BASI-COP**, a tri-basic copper sulfate made by Sherwin-Williams. Extensive experiments conducted in Michigan have shown this compound to be more de-





PRACTICAL  
DEPENDABLE  
INEXPENSIVE

## SOUND, PRACTICAL INFORMATION

and peach  
best qual-  
fine wet-  
led espe-  
and peach  
of scab

sectional  
ve know  
r, choose  
er peach  
that of  
belief that  
culio of  
because it  
neutralize  
peaches,  
develop-  
Safe-N-  
orm for  
our dust  
olutely  
oles and  
effective  
lopment  
onsidera-

ontrol of  
ions of  
ontrol  
proves  
in the  
duction

r com-  
ch has  
copper  
ts con-  
re de-

RY, 1941

pendable than lime-sulfur or Bordeaux mixture in the control of cherry leaf spot because it not only controls leaf spot as effectively as the other two compounds, but does so without injuring the foliage by causing premature dropping and stunting, nor does it reduce the size of the fruit.

As the world's largest producers of spray and dust materials, the Sherwin-Williams Company is constantly seeking better, lower cost methods for the control of orchard pests. This company spends many thousands of dollars each year in research, development and testing in the field. We do not ask any grower to do the testing because we work directly through state agricultural colleges, through the medium of fellowships, and by means of our own experimental projects conducted both in the laboratory and in the field.

It is as a result of sound research and experimental work on the part of Sherwin-Williams that Spralastic has been developed and proved to be the most important commercial development in codling moth control since arsenate of lead was introduced.

In Sherwin-Williams Spralastic a new principle is involved. It not only acts as a spreader and deflocculator, but as a *deposit builder* as well by increasing the adhesive properties of the arsenate of lead particles so that a *maximum percentage remains on the fruit and foliage*. In most spreaders, it is not possible to go beyond the optimum dosage for *spreading* without *increasing the run-off*. With S-W Spralastic, as the dosage is increased up to  $\frac{1}{2}$  gallon with 3 pounds of arsenate of lead to 100 gallons of spray, the deposit increases accordingly.

You can buy S-W insecticides and fungicides anywhere, at market prices, for the Sherwin-Williams Company has distribution in every fruit growing section of the country and warehousing facilities suitable to the needs of every section.

We invite you to write us about your spraying program and problems. We are in a position to give you the most up-to-date, complete and practical advice, and this we will do at any time—promptly and cheerfully.

**THE SHERWIN-WILLIAMS Co.**

Insecticide Dept.

101 Prospect Ave.,

Cleveland, Ohio



JANUARY, 1941

AMERICAN FRUIT G  
[Advertisement]

# WHY WE DON'T TALK HORSEPOWER

but  
principles ..

and  
flexibility ..

and  
cost of crops ..

At the wheel of a Ford tractor with Ferguson system you are in command of something bigger than horsepower. You are master of a new principle of farming.

The easiest word to say about any product is better. We don't ask you to take our word that this product is better. We do ask you to realize that it is different.

The Ford tractor with Ferguson system is different because we set out, not just to make another tractor, but to make farming profitable. To do that we had to throw overboard all the old ideas about pulling and controlling the basic implements of farming.

We make tractor and basic implements one operating unit, easy to operate and control, and performing an incredible amount of work.

In fact, and in the experience of 37,283 farmer-owners, this tractor will do all kinds of farming on all kinds of farms as it has never been done before by anything, horse or machine. It farms the way you have always wanted to farm.

The net of it is that the Ford tractor with Ferguson system is made to fit your farming. No longer are you at the mercy of the limitations of your equipment. This tractor makes you the manager.

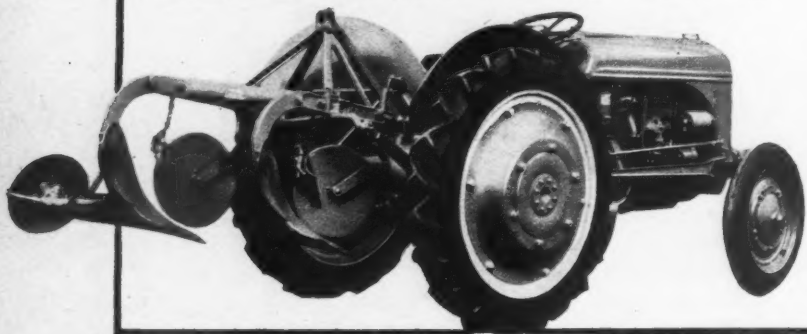
In our book, nothing counts unless the farmer makes a profit. You can do that only one way: by cutting costs. The principle which we have built into the Ford tractor with Ferguson system makes your equipment so efficient that you have lower investment, save fuel, make time, and increase your yields.

Our purpose is to make family farming both profitable and interesting. We know we have the answer.

You'll know we have the answer when you get a demonstration of this utterly different equipment on your own farm. No words can describe this great advance in farming method. See for yourself. Ask the nearest dealer to show you ... everything!



The Ford tractor with Ferguson system is sold nationally by the Ferguson-Sherman Manufacturing Corporation, Dearborn, Michigan, and distributed through dealers in every part of the country.



GETS ALL YOUR WORK DONE ON TIME

## FOUR QUARTER PRUNING

(Continued from page 17)

as the writer did two years ago, is to classify it as moderate to severe, and more likely severe. However, it is clearly evident on visiting the orchard in July or August that the trees are not over-vegetative. In fact, it is difficult to find a shoot which could be classified as a water sprout. This may be due to the fact that what few sprouts are present in June are removed as a part of the fruit thinning program; but, probably more important, it is due to the relatively small cuts which are made during the winter pruning.

Each pruner who is held responsible for a definite section of the orchard is instructed to make rarely, if ever, a cut larger than three-fourths inch. Instead of using the word "cut" or "prune" in giving instructions to these men, the word "nip" is used. As a result, the foremen and crews think in terms of "nipping."

By having the pruning job so definitely laid out to pattern for each tree the men are able to tell from year to year why certain "nips" were made the preceding year. In other words, if a limb an inch or two inches in diameter at the base were present in the open wedge and were obstructing the passageway through the tree, it would not be removed immediately but would be nipped back each year to spurs or twigs bearing fruit buds until the limb after four or five years had become so weakened that it could be removed without causing water sprouts to appear at the point of removal.

The fact is impressed upon the men that water sprouts are largely wasted energy as far as fruit is concerned and no type of cutting should be done which would promote them. In addition, they are aware of the fact that any type of cutting on a branch, whether light or severe, is correspondingly a dwarfing process, especially to that limb and to a somewhat lesser degree to the tree as a whole.

This nipping at a branch over a period of two or more years is practiced on small branches as well. Even branches three-eighths to one-half inch in diameter are removed only after two or three years of nipping. The main object, however, in not removing the limbs immediately is to obtain from them a peck or three to four bushels of apples.

Probably the greatest value in having the tree divided into four quarters and held within limited width and height is the fact that each quarter has the advantages of a 10 to 12-year-old tree from the standpoint of penetration of light, efficiency in spray coverage and ease of thinning and picking. Portable

JANUARY, 1941



## FOUR QUARTER PRUNING

(Continued from page 22)

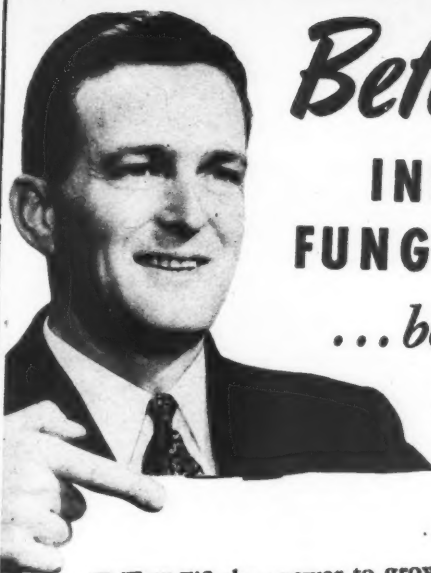
sprayers are used in the Grand River Orchards, although this type of tree would be adapted especially to stationary spraying. The two men riding the rig both spray with the wind, one covering the upper two-thirds of the tree and the other spraying the lower one-third or one-half of the tree from the rear platform of the rig. For example, as the first tree in a row is approached from the west (wind from southwest) the spray is directed toward the north, each man covering his portion of the tree in the following fashion: (1) Into the west "V" by a steady downward sweep; (2) then up, down, up, covering the first quarter from the outside; (3) down, steadily down in the south "V" allowing the force of the spray to drive it in a swirling fashion through the tree, then up fast in the south "V"; (5) switch to the next tree and down in its west "V"; (6) then back to first tree to shoot spray directly into the east "V," and so on.

The thinning and picking operations are simplified considerably by the open channels. The picker or thinner carries his eight-foot three-legged stepladder into each "V" and is able to thin or pick all about him as well as inside each quarter. Most of the outside of the quarters is picked from stepladders which eliminate the weight of ladder and man pressing against closely matted groups of apples and knocking them to the ground.

When trees are held within definite bounds, several improvements are claimed by these growers over conventional systems of pruning. In the first place, a large tree, according to their records, is expensive to prune, thin, pick and especially difficult to cover completely with spray material. The question arose with them, therefore, as to whether they desired to save money on the pruning operations and allow the tree to grow large, or keep the tree small and save on several orchard operations with the additional likelihood of higher grade fruit. Likewise, they are in agreement with the observations and data obtained by F. H. Beach in Ohio that most growers can and do cover their trees fairly well with spray to a height of 15 feet but above this height the codling moth and scab become progressively greater. This also is evidently agreed upon in Indiana according to the recent publications of C. L. Burkholder.

The small trees when maintained within approximately a 20-foot width can be planted 50 trees to the acre as these growers have done, and the land can be cropped more efficiently. They are of the opinion that 50 small trees to the acre which bear

(Continued on page 26)



## Before You Buy

### INSECTICIDES OR FUNGICIDES FOR '41—

...be sure to check this  
**Du Pont List!**

**H**ERE'S the answer to growers who want the best in crop protection. Every chemical produced by du Pont is backed by thorough research—tested in laboratory and field plots—manufactured under rigid du Pont standards of control. You'll find a du Pont insecticide or fungicide to meet every pest control problem.

**MUREXFORM Lead Arsenate**—a finer particle lead that stays in suspension eliminating clogged screens and nozzles. Mixes readily with lime sulfur without sludge formation. And gives even coverage to fruit and foliage without the addition of a spreader.

**GRASSELLI Lead Arsenate**—For those who want a heavier lead with high killing power. Works well through long lines and is compatible with summer oils. Used with a suitable spreader it lays an even protective film.

**SULFORON Wettable Sulfur**—A micro-fine, wettable sulfur. It is compatible with arsenicals, mixes readily with water, sticks to foliage with excellent spreading and covering power. A specific control for fungous diseases and mites.

**GRASSELLI Lime Sulfur**—Two in one—an insecticide and fungicide. Use it to control San Jose scale in dormant season and fungous diseases such as scab, leaf curl and leaf spot. Available in solution or dry form.

#### OTHER DU PONT SPRAYING AND DUSTING CHEMICALS

Calcium Arsenate  
\*DUTOX Fluorine Insecticide  
Copper-A Compound  
\*GRASSELLI Spreader-Sticker  
\*LORO Contact Insecticide  
Flotation Sulfur Paste  
\*PARAPONT Paradichlorobenzene  
Bordeaux Mixture  
Dust Mixtures  
Zinc Sulfate — Flake and Crystal

\* Trade Mark

\*PARKONE Hormone Harvest Spray  
Di Nitro Cresol Powder  
\*BLACK LEAF "40"  
\*BLACK LEAF "155"  
Cryolite (synthetic)  
Copper Sulfate  
\*FLUXIT Spreader  
Spray Oil—Dormant and Summer  
Sulfur  
Paris Green

See your supplier about this  
tested line of DU PONT products

**E. I. DU PONT DE NEMOURS & COMPANY, (INC.)**



Grasselli Chemicals Department Wilmington, Del.



# We saved.. Probably you can too..

## by figuring your own car financing

Just send for your copy of the new GMAC Figuring Chart that enables you to figure in advance—in dollars and cents—the complete details of the finance plan that best suits your requirements—based on the length of time you want and the amount you wish to pay monthly.

Then, if you like, compare its advantages and cost with other plans—not forgetting to check the insurance protection for your car, which this plan includes.

Simply fill in and mail the coupon below TODAY. We will send you your GMAC Figuring Chart immediately. Then see your General Motors dealer.

### Seasonal Income Plans

If your income is received on a seasonal basis and you desire payments to conform with the receipt of your income, please so indicate on the coupon. In return, you will receive the details of various payment plans designed to help you in the purchase of a new or used passenger car or truck.

Available only through dealers in  
**CHEVROLET**  
**PONTIAC • OLDSMOBILE**  
**BUICK and CADILLAC cars**

Send for this  
Figuring Chart

**GENERAL MOTORS  
INSTALMENT PLAN**

GENERAL MOTORS ACCEPTANCE CORPORATION  
1775 Broadway, New York

Please send me copy of ☐ Seasonal Income Plan  
☐ GMAC Figuring Chart for the car checked below:

☐ CHEVROLET ☐ PONTIAC ☐ OLDSMOBILE ☐ BUICK ☐ CADILLAC

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_  
County \_\_\_\_\_ U.S.A.

**NO SALESMAN WILL CALL**

## KEEP ORCHARD RECORDS

(Continued from page 11)

this kind, the writer has frequently found his memory and the impressions of others to have been in error. An orchard diary may furnish a quick and ready reference as to former price levels, business transaction dates or previous spray schedules.

Requisites of a good diary are brevity, neatness, convenience for quick reference and presence of essential details in cases of special methods and formulas or of unusual conditions. The diary should be on good quality standard or legal sized ruled paper, preferably of the loose leaf type. Each year's records may then be bound with fasteners, with a front cover sheet indicating contents and period covered. If only one side of each sheet is used for the diary, special data, sketches and more complete descriptions of especial interest may be entered from time to time on the reverse side of the page covering that period. Underlining key words or items of particular interest aids greatly in finding such information later on. The use of abbreviated sentences from which all unnecessary words have been eliminated aids in condensing the information.

Each year that such a diary is kept adds to its cumulative value. Most growers who begin keeping notes of this type are surprised at the frequency with which they wish to refer to their orchard diary.

### Map of Orchard

Every grower, large or small, should possess a large map or chart of each orchard. Such a chart will be a constant aid in planning orchard operations, calculating distances, indicating trees or areas for special treatment, locating pipe or tile lines or for visualizing the general orchard layout. Visitors are always interested in such a map.

When circumstances justify the initial expense, a combination of spray record and orchard chart, printed on a good grade of paper, may prove most useful. Here, in addition to spray information, all manner of data may be recorded. Perhaps it is trees or rows that are to be removed. Perhaps the chart is used for outlining the plan of a stationary spray system, with the location of drains, connections and outlets shown. In other instances a permanent record of the position of tile lines may be desired, or the outline of certain experiments recorded. Such a printed chart, large enough to show essential details, will have many and varied forms of usefulness.

### Individual Tree Records

Some method of recording information concerning individual tree performances can profitably be used by most growers. If individual per-



formance records are practical with livestock and poultry, why are they not with fruit trees? Weak or unproductive trees require as much attention as the most productive trees, and may continue to require it for 10 to 20 years.

The writer maintained individual tree production records for four years on some 8000 apple trees and for eight years on a smaller number of trees. The time required was surprisingly small after an effective system had been worked out.

A number of different systems for recording yields were tried. Paper tags were used with the idea of keeping the record on the tree itself. After a series of trials, a parchment tag was selected as the least affected by weather and the fraying resulting from being whipped against twigs and small branches. Every tree was tagged, and yield designations were recorded by holes punched in appropriate squares, as well as designations as to tree, row and block numbers. However, many of the tags became so weathered that the record was nearly indistinguishable after the second or third year. Shellac applied to the tags soon cracked or peeled off and in so doing removed completely the ink with which the tags were printed. In other instances, the tags were removed during the pruning operations, or just disappeared.

The method found most practical was the use of cross section paper, five squares to the inch, secured from a local book store in pads eight and one-half by 13¼ inches. The various blocks were outlined on sheets of this paper, each square representing a tree area. Prominent points such as roads and driveways were indicated for easier orientation. The sheets were attached to a clip board for convenient use in the field.

A series of scores from one to five was used to indicate, respectively, yields of "nothing or very poor," "unsatisfactory or poor," "fair or just breaking even," "good or profitable" and "very heavy or full crop." A series of symbols was worked out to designate younger trees, odd varieties, weak trees, dead trees, etc.

Recording of tree yields was done as shortly before harvest as possible. This was found important as records taken much before picking time were inaccurate because of the difficulty of seeing small or uncolored fruits.

For rapid work, an assistant walked down one side of the row, while the recorder walked along the side of heaviest average yield. It was necessary to observe opposite sides of all large trees because of the marked variation between halves in many cases. The yield score of each tree was entered in the corresponding square. Thus with the assistant calling out the yield of the opposite

(Continued on page 28)

# BALL-BEARING STEERING *57% Easier*



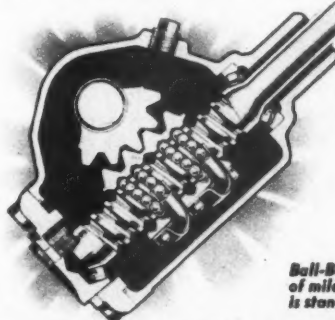
## Driving is *Effortless* in America's Strongest Pulling Trucks

If it "steers like a truck, it's not a GMC!" General Motors Trucks are as easy to handle as your car. Tests prove that their Ball-Bearing Steering saves as much as 57% of the work at the wheel. And when you add the performance advan-

tages of GMC's famous Super-Duty Engines, you've got *drive appeal* that simply can't be matched. For two years, GMCs have led the whole field in pulling power in every engine size from ½ to 15 tons. Try one of these value-built GMCs today. Then, see your GMC Dealer's Mileage Meter Test that proves greatest gas economy of all trucks.

**ONLY GMC TRUCKS OFFER ALL THIS EXTRA VALUE**  
SUPER-DUTY Engines with gas-saving TURBO-TOP Pistons • BALL-BEARING Steering in all models • RIDER-EASE Cabs with buoyantly cushioned seats and QUICK-VISION Instrument Panels • SEALED-BEAM Headlamps

Our own YMAC Time Payment Plan assures you of lowest available rates



Ball-Bearing Steering has been proved in millions of miles of service in heavy GMC Trucks. Now it is standard in all GMCs, including ½-ton models

THE TRUCK OF VALUE

# GMC TRUCKS

GASOLINE — DIESEL



For better Fruit and  
a better Cover Crop, fertilize  
your orchard a month or more before  
blossom time with

**GRANULAR 'AERO' CYANAMID**  
the **LIME-NITROGEN FERTILIZER**  
21% Nitrogen—70% Lime



**AMERICAN CYANAMID COMPANY**  
30 ROCKEFELLER PLAZA NEW YORK, N. Y.

## FOUR QUARTER PRUNING

(Continued on page 23)

their crops throughout the tree are more valuable than 32 large trees which bear their fruit on the periphery with their centers almost devoid of fruit and leaves. By their type of annual or biennial trimming they have demonstrated as far as they are concerned that it is possible to prevent these "dead centers" from developing and at the same time not induce an over-vegetative condition. That they have not reduced yield by this type of pruning is shown for six varieties in the table on page 17.

Each year over the six-year period the total fruit crop from this orchard graded out between 80 and 85 per cent Extra Fancy, five per cent culls or unclassified and the rest U. S. No. 1. Sizes for the better grades ran from two and one-half inches up, but largely in the two and three-fourths to three-inch sizes.

The trees for which data are given in the accompanying table had received very little or no pruning until they were 13 years old. This was in line with an earlier pruning program of this orchard. Because at that time the trees were becoming difficult to manipulate, Mr. Dean conceived the idea of the so-called open channels. In addition, he found later that by performing most of a "fanning" operation on Rome Beauty filler trees the winter preceding a heavy crop, he could produce large sized apples and at the same time prevent the appearance of undue sucker growth. Hence, from this the idea developed of attempting to keep the permanent trees within limited bounds by judicious trimming. The Four-Leaf Clover System was started, therefore, on the above trees in about the year 1929 but the trees were not considered to be fully converted to this system until five or six years later. Of course, the slow conversion was done primarily to prevent the occurrence of sucker growth and sunscald. In a few instances where the trees were opened too hurriedly by less careful workers, bare limbs were left openly exposed and scald resulted.

It should not be assumed from the illustrations of the McIntosh tree on page 17 that this is necessarily their idea of the Four-Leaf Clover System of pruning. This tree is one of a large group of trees which was converted to the system beginning at the age of 13 years when it had previously received very little pruning and no training. As a result, the main limbs for the most part, as shown in the illustrations, are placed undesirably. In a few similar cases where there is danger of splitting, especially on Baldwin and Jonathon, the trees are braced two-thirds distance up the limbs with heavy wire. Mr. Dean's records show that the

**Standard** RIDE OR WALK

**GARDEN AND SMALL FARM Tractors**

Powerful 1 and 2 Cylinder Tractors for Small Farms, Gardeners, Florists, Nurseries, Fruit and Poultrymen.

**FOUR MODELS**  
Ample Power for Field, Haying and Truck Crop Tools. Run Pumps, Saws and Belt Machines.

Steel or Rubber Tires  
High Wheels—Enclosed Gears  
**LOW PRICES**  
Write for Easy Terms Plan and **Free Catalog**

**STANDARD ENGINE CO.**  
Minneapolis, Minn. New York, N.Y. Philadelphia, Pa.  
3211 Como Ave. 637 West 36 St. 2445 Market St.

**HERE'S WHY**

**"Snap-Cut"**

**IS THE WORLD'S EASIEST CUTTING PRUNER**

"Snap-Cut" patented cutting action employs powerful, keen "V" blade and anvil slicing method. Makes clean quick-healing cuts without effort. Chrome finish. Finger-tip catch. 8" size \$2. 6" size \$1.25 (with flower holder \$1.50). At dealers or sent postpaid—moneyback guarantee.

**FREE—40 page Pruning Course—with "Snap-Cut" Pruner or mailed, book only, 10c.**

**SEYMOUR SMITH & SON, Inc.**  
61 Main St., Oakville, Conn.



materials and labor involved in such bracing is less expensive than labor required to cut bracing poles and carry them to and from the trees each year. Due to the relatively short main limbs of trees pruned to the Four-Leaf Clover System there is less leverage involved and wire bracing appears to suffice each year.

More recently with newly set trees Mr. Dean has selected the main limbs shortly after planting with the true Four-Leaf Clover System in mind. His ideal tree is one which has the lower limb about one foot above the ground on the southwest side of the trunk (if rows are running east and west), the next limb on the northwest side six to eight inches above the first, and the third limb arising on the northeast side six to eight inches above the second. The center trunk then continues straight for eight to 10 inches where it is cut toward the northeast to account for the northeast quarter of the tree.

Thus, in many respects these trees are started similar to most apple trees today except that in early training attention is given to keeping the two channels open from north to south and east to west. Sometimes it is almost impossible to obtain one good main limb for each quarter, and this is especially true on two-year trees from the nursery which already have their framework partially established. But it is not entirely necessary that only one scaffold limb comprise the full quarter; two or three smaller ones could serve as well provided they were not directly parallel, one above the other.

Probably an ideal system of starting the trees, according to Mr. Dean, would be to plant one-year vigorous whips 30 feet apart both ways and cut them back to 33 to 36 inches. Then deshoot them when the shoots are four to six inches in length, leaving only those three or four shoots which are approximately in the desired position.

In conclusion, it could be stated that while this system of pruning and training may appear sound, in many respects it should be taken into account that it has proved successful in only one orchard which is well situated from the standpoint of climate and color development in the fruit. This region likewise is troubled with but one to one and one-half broods of codling moth, and practically no Brooks spot, blotch or bitter rot. It is interesting to note, however, that this orchard has proved successful in spite of the poor type of orchard soil upon which it is growing. The soil is a fairly heavy clay loam which permits only two to two and one-half feet of rooting. This in itself would indicate, under shallow rooting conditions, an additional advantage of the Four-Leaf Clover System of pruning in keep-

(Continued on page 29)

## "WHAT OUR DIESEL D2 SAVES ON FUEL IS ALL SAVING!"

... Dan Grant Ranch, Somerton, Arizona

It's a traction test—to chop 6-foot ropy, hemp cover-crop into the soil—with heavy-duty offset disking 8 inches deep! That's what this "Caterpillar" Diesel D2 Tractor is doing for owner Dan Grant, Somerton, Arizona—disking 15 acres of grapefruit grove *both ways* in 10 hours, on only 15 gallons of 7c fuel!

"The Diesel D2 replaces a former model Twenty and a Twenty-Two Tractor and does all the work," states Vergil Vance, ranch foreman. "The D2's fuel cost is only half that of the Twenty-Two; oil and repairs cost about the same. So what the D2 saves on fuel is *all saving*. The D2 takes care of 300 acres of citrus, including 200 acres on contract."

Many a fruit-grower saves \$200 and more on fuel expense alone, with a Diesel D2. And only "Caterpillar" gives all these Diesel plus values: (1) Positive, all-weather starting; (2) Absorbent-type, long-lasting fuel filters; (3) Temperature-control, viscosity-protection of lubricat-



ing oil; (4) "Caterpillar" copper bellows final drive seals; (5) The backing of 35 and more years of track-type tractor experience!

CATERPILLAR TRACTOR CO., PEORIA, ILL.

## CATERPILLAR

*Diesel*

TRACK-TYPE  
TRACTORS

TERRACERS

ENGINES

CATERPILLAR TRACTOR CO., Dept. A-11, Peoria, Ill.

Gentlemen: I want to find out whether I should own a "Caterpillar" track-type Tractor.

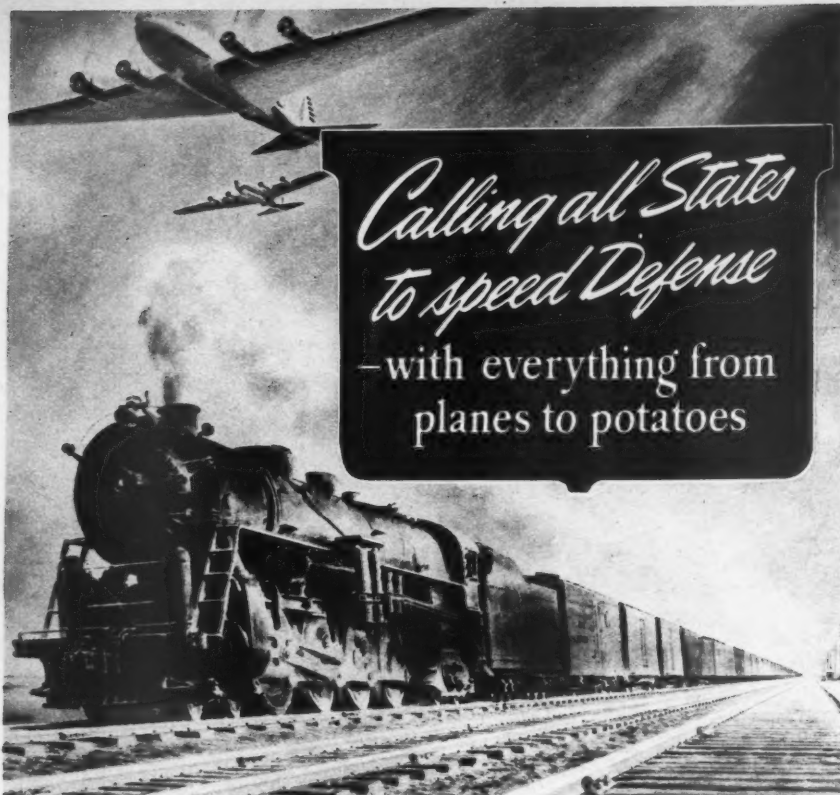
Size of orchard \_\_\_\_\_ Power now used \_\_\_\_\_

☐ How can I get a competent equipment survey "with no strings attached"?

Name \_\_\_\_\_

Town \_\_\_\_\_

County \_\_\_\_\_ State \_\_\_\_\_



*Calling all States  
to speed Defense*  
—with everything from  
planes to potatoes

**I**T'S only natural that the need for building airplanes for defense should be in the spotlight just now.

That need is new and dramatic, and—as perhaps few people know—it's a job in which every state in the union plays a part.

In the list of materials needed is everything from abrasives, acids, aluminum and antimony to tin, tungsten, turpentine, wool and zinc.

According to one well-informed writer, "55 per cent of the average requirements for aircraft fabrication is shipped in excess of 1,500 miles for assembly"—which means the *American railroads will do the major transportation job.*

They will do the job for the aviation industry just as they do for all the industries of America—and beyond that, they'll do the job

for America's 6,800,000 farms.

Now the fact is, the job the railroads do in serving farms is far bigger and more exacting than the one that's done for the airplane industry—as shown by the figures for one simple crop, potatoes.

In the year 1939, for example, 3,193,373 tons of potatoes moved to market by rail.

The big fact is—the American railroads handle not only the needs of defense but the needs of everyday life—the food we eat, the clothes we wear, the fuel that warms us, and all the things we use every day—and do it with such smoothness that folks seldom give it a thought.

Isn't that the best evidence that the railroads are America's No. 1 transportation system in *competence* as well as size?

#### **NOW—TRAVEL ON CREDIT**

America's railroads offer new, simple installment payment plan for trips and tours.

You can take your car along too.

**SEE YOUR LOCAL TICKET AGENT.**



## **ASSOCIATION OF AMERICAN RAILROADS**

**Washington, D. C.**

## **KEEP ORCHARD RECORDS**

*(Continued from page 25)*

half of each tree, the recorder could score a row almost as fast as he could walk. As each new variety ripened, space on the chart was filled in. Trees needing special attention or removal, young trees and vacancies were indicated. It was not difficult to train an alert and dependable young man to do this work. As soon as time permitted, following harvest, the results of these work sheets were transferred to an outline of the entire orchard, made by pasting together a number of sheets of the same kind of paper.

For a more graphic picture of the general production story, colored pencils were employed. A red circle was used to represent an unsatisfactory yield, green an intermediate yield and blue a satisfactory yield.

At the end of four years, the records were combined by entering the four scores of each tree in one square. The same quarter of each square was used for the same year.

A four year picture is necessary in order to include two "off" years and two "on" years.

From a four-year record, elimination of boarder trees may be started. Upon examination of trees indicated as consistently poor producers it is usually possible to determine the cause of low yield or at least the disposition to be made of the trees. If the tree is young, it may not have established its full bearing habit, even though large in size. Very vigorous trees often are slow in coming into bearing, but may bear heavy crops when once started. On the other hand, more mature trees tend to repeat their four-year record, barring unusual weather or advancing age.

Records are especially valuable where filler trees have not been removed. Frequently the record will show certain fillers to be more valuable producers than adjoining permanent trees. Then why remove the better tree merely because it was originally designed for a filler? Why not remove the less valuable permanent adjacent to it?

#### **Photographs**

Good photographs (snapshots) are invaluable in recording special operations, results of treatments, mechanical innovations and original appearances. One good picture often tells a story more comprehensibly than words could ever do. A file of orchard photographs is a great satisfaction. One often asks himself why he should take the time to photograph some operation or result, seemingly so clear in mind as never to be forgotten. Yet later the photograph may be most valuable in

*(Continued on page 35)*



## UNCLE SAM BOASTS MOST DATES

(Continued from page 13)

resent the real secret of culturing these desert sweets, for only by replanting the offshoot of a vigorous parent can dates be kept true to type. Each seedling represents a new variety.

Unlike most products of the soil, dates require high temperatures and long, dry summers. Less than three inches of rain falls each year in the Coachella, yet the farmers pump from seven to 10 acre feet—120 inches—around their roots. To protect the fruit against cracking, permanent paper umbrellas are tied over each bunch. Commencing in September, the crop is picked and moved to a packing house at Indio, where the large, luscious Deglet Noors are packed in tins, while other varieties are put up in transparent bags. Smaller dates are crushed and made into candy, flakes and other confections.

Date palms are strange plants. They grow only at night, and sleep during the day. During the winter, they hibernate; yet when the thermometer climbs once more to 46 degrees F., they resume their cycle of producing. Most of the crop is harvested by mid-December, after which the growers start plans for producing a rich harvest next year. Deglet Noors, representing nine-tenths of the crop, require particular kinds of soil, of which only 10,000 acres are known to be available. Those 10,000 seem to mark the limit of Deglet Noor culture in the United States.

## FOUR QUARTER PRUNING

(Continued from page 27)

ing the treetops relatively small and within reasonable proportion to the limited rooting. It should not be overlooked also that with an increasing and almost uncontrollable codling moth situation in some fruit regions, the smaller trees or open channels characteristic of this system of pruning may have a special advantage in aiding with a more complete coverage of the fruit with spray material.

The Four-Leaf Clover System of pruning has not been tried on other tree fruits except on a small scale with plums and cherries where it evidently has about the same advantages as outlined for apples. It probably would not apply so well for peaches and pears.

JANUARY, 1941

Products by FARQUHAR



# This Catalog

shows why  
**IRON AGE  
SPRAYERS**  
protects your  
crop profits



**HEART OF IRON AGE  
Sprayers—the Victory Pump**  
Easy accessible Victory Pump is horizontally designed for working pressures up to 1000 P.S.I. Slower speed for longer life. Built in 6, 10, 14, 20 and 37 gallon per minute capacities.

**G**ROWERS, large and small, acclaim Iron Age Sprayers as their best crop insurance. The easy working, trouble-free Victory Pump makes every drop of insecticide count with its high pressure atomization. There's a cost cutting Iron Age Sprayer for every orchard or grove purpose—you'll find it in this catalog. Write for your copy today.

A. B. FARQUHAR CO., Limited, 1422 Duke St., York, Pa.

**I CAN'T AFFORD TO TAKE  
CHANCES, THAT'S WHY I USE  
ONLY GENUINE, DEPENDABLE  
TREE TANGLEFOOT**

For years I've used TREE TANGLEFOOT for banding my trees and vines against the ravages of destructive canker worms, cutworms, tussock-moth caterpillars, and similar pests. TREE TANGLEFOOT has always given 100% protection. It's a SAFE banding compound—you can use it on young trees and shade trees as well as mature fruit trees. And it stays effective for many months, regardless of weather. As for cost, it's the cheapest protective insurance I have ever discovered.

**Write for TREE TANGLEFOOT Literature**  
THE TANGLEFOOT CO. • GRAND RAPIDS, MICH.

**TREE TANGLEFOOT**  
DEPENDABLE PROTECTION AGAINST CLIMBING INSECTS



FOR BANDING TREES

FOR BANDING VINES



**TC**  
TENNESSEE CORPORATION

Use

For Dormant Sprays

# MICROGEL

A neutral Copper Fungicide suitable for mixing with Oil.  
An amorphous Powder containing 50% Copper as Metallic.  
Write for Free Bulletin

Patent  
U.S. Patent  
Office

Manufactured by **TENNESSEE CORPORATION**  
ATLANTA, GEORGIA

# NICHOLS

COPPER

TRIANGLE  
BRAND

SULPHATE



**FOR OVER 50 YEARS  
THE STANDARD COPPER  
SULPHATE FOR  
BORDEAUX MIXTURE**

When you discuss this year's insecticide and fungicide order with your dealer, ask him about Nichols Triangle Brand Copper Sulphate. Listen to him carefully for he undoubtedly has handled Triangle Brand since he started in business and knows what he's talking about. He'll tell you that Triangle Brand is the largest selling Copper Sulphate because it's the oldest yet the newest Copper Sulphate. The newest development being Triangle Brand "INSTANT" in finely ground powder form for easy, quick, sure home mixing of Bordeaux.

Your dealer also carries Nichols Triangle Brand Copper Sulphate in Large and Small Crystals, Granular and Snow for sprays; and MONOHYDRATED, 35% Metallic Copper, for Copper-Lime dusts. Ask him for one of this year's booklets on the preparation and use of Bordeaux Mixture.

**PHELPS DODGE REFINING CORP.**

40 Wall Street,  
230 N. Michigan Ave.,

New York, N.Y.  
Chicago, Ill.

**THE RIGHT WAY TO FACE  
ANY SPRAY—**

**Wear This New Cesco**

**E-Z-"C"**

**Face and Eye  
PROTECTOR!**



★ Here is a splendid idea in Face Protection. See that piece of Transparent Ribbon? 30 feet of it in a roll. When your visor becomes water-spotted or smudged, simply pull out a few inches, tear it off, and ALL'S CLEAR again!

**Comfort—Security—Better Crop Coverage!**

E-Z "C" offers the modern, up-to-date SAFE method of tackling lime, sulphur, lead and poisonous spray jobs. You SEE WHAT YOU COVER at all times, thereby getting more thorough application of the spray. Order a sample from your hardware dealer or seedsman today—or write direct. \$3 complete.

**CHICAGO EYE SHIELD CO.,** 2307 Warren Blvd.  
Chicago, Illinois

**KINKADE GARDEN TRACTOR**

and Power Lawnmower  
A Practical, Power Plow and Cultivator  
for Gardeners, Suburbanites, Florists,  
Truckers, Nurserymen, Fruit Growers  
Low Prices - Easy Terms  
American Farm Machine Co.  
1105 33rd Av. S.E. Minneapolis, Minn.



PAGE 36

# Camera!



Leonard K. Firestone, with Mrs. Firestone looking on, receives the grand champion steer of the 1940 International Livestock Exposition from Evelyn Asay who raised and showed the animal.



Meredith P. Reed, Vincennes, left, president of the Indiana Horticultural Society, and Ferd Boltzen, Linton, Quality Plus Orchardist for 1940, talk to Monroe McCown, acting secretary.



L. J. Doud, Wabash, left, who was re-elected vice-president of the Indiana Horticultural Society, and David Simpson, Vincennes, listened to amusing as well as instructive speeches.

AMERICAN FRUIT GROWER

JANUARY, 1941





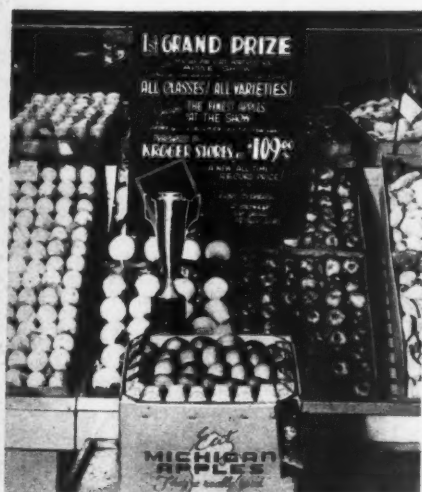
The late Fred E. Gladwin photographed with one of his grape originations, the Fredonia.

• FRED E. GLADWIN •

FRED E. GLADWIN, 63, widely known horticulturist of Fredonia, N.Y., succumbed to a heart ailment on November 16. Mr. Gladwin was chief in research in pomology and in charge of the New York State Agricultural Experiment Station's Vineyard Laboratory at Fredonia since its inception in 1909. He was widely known among fruit growers, particularly grape growers, and was recognized as the leading authority in this country on matters pertaining to grape culture.

Among the research problems upon which Mr. Gladwin worked through the years was the question of commercial fertilizers for grapes, the pruning and training of the vine, the control of powdery mildew, the production of early maturing table and wine grapes, the grafting of grapes on hardy rootstocks, and the testing of varieties. He was responsible for the introduction of several new grapes, including the well-known Fredonia and Portland.

In great demand as a speaker before growers, Mr. Gladwin was also the author of numerous bulletins and technical and popular articles. His contributions to AMERICAN FRUIT GROWER included "The 'New Deal' in Grape Varieties," "Pollination with Particular Reference to the Grape," and "Origin of Grape Varieties."

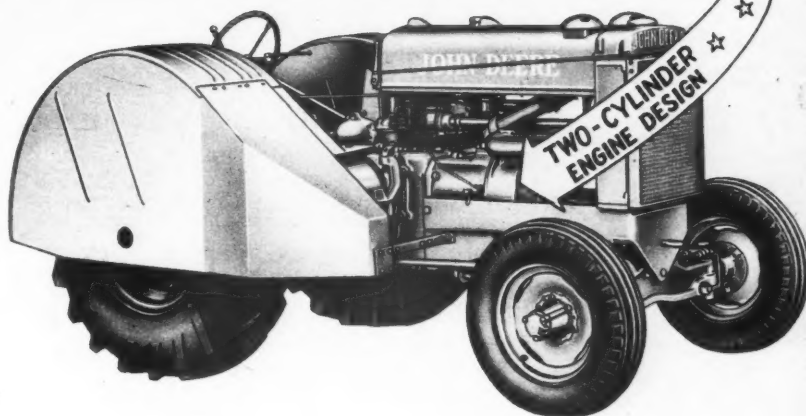


APPLES: \$1.09 A BUSHEL

This record-breaking price was paid by the Kroger Grocery & Baking Company to J. R. Braman of Grand Rapids, Mich., for his prize-winning bushel of Steele Red apples which was auctioned after the close of the recent Michigan State Horticultural Society Apple Show. The box the apples are shown in was designed for and is being used in commercial storage and transportation, a new field for corrugated fiber boxes.

JANUARY, 1941

# THAT OUTSTANDING ECONOMY OF A JOHN DEERE BEGINS HERE



Two-cylinder engine design! For seventeen years, this exclusive John Deere feature has been making tractor history . . . helping more than a quarter of a million owners of John Deere Tractors to cut their costs . . . to do their work easier, faster, better.

Specially designed to burn the low-cost fuels, John Deere Tractors cut fuel costs . . . enable you to do more work for a dollar's worth of fuel.

But the ability to burn the low-cost fuels successfully and efficiently is only one advantage of John Deere's two-cylinder engine design. It likewise makes possible the straight-line transmission with no bevel gears to consume power . . . the belt pulley on the crankshaft . . . the proper distribution of weight for better traction . . . the fewer and heavier parts that last longer . . . the easy, simple maintenance.

Combined with these outstanding mechanical advantages in John Deere Grove and Orchard Tractors you have an equally impressive array of operating superiorities—a hand clutch that you can operate sitting down, standing up, or from the ground . . . smooth, responsive steering . . . foot-controlled differential brakes for short turns . . . built-in power take-off . . . handy controls . . . proper speeds—every feature you want and need.

Ask your John Deere dealer to arrange a demonstration of a John Deere Grove or Orchard Tractor or any one of the nineteen great John Deere Tractors. Experience for yourself the smooth, unfaltering power of a John Deere, its easy handling, its economy of operation. You'll want a John Deere. For more information by mail, use the coupon below.



For cultivating berries, as shown here, for work in vineyards, small groves and orchards, the gasoline-burning John Deere Model "L" is the ideal tractor. Has the power to pull a one-bottom plow.



With power to handle two 14-inch plows, this John Deere Model "BO" moves right along with a John Deere Field and Orchard Cultivator. The Model "AO" handles two 16-inch plows.

## JOHN DEERE Two-Cylinder Tractors

FOR ECONOMY . . . SIMPLICITY . . . DEPENDABILITY . . . EASY HANDLING

JOHN DEERE, Moline, Ill., Dept. L-42

Tell me more about cutting costs and doing a better job with a John Deere Tractor. I have checked the models in which I'm particularly interested.

☐ One-Plow Model "L" ☐ Two-Plow Models "AO" and "BO" ☐ General Purpose Tractors

Name

Town

State  R.F.D.

AMERICAN FRUIT GROWER

PAGE 31

# SIMPLE



AS  
**2  
+  
2**

## USE STAUFFER SULPHURS

Add 20 special grades of Stauffer Sulphurs to 55 years of manufacturing experience, plus the largest yearly sales of Agricultural Sulphurs, plus distribution in every agricultural section of the country. Add these up and it's easy to see why leading commercial growers depend upon Stauffer Sulphurs for effective and economical control of Apple Scab and Brown Rot on Peaches. Simple as 2 plus 2, isn't it?

### STAUFFER SULPHUR PRODUCTS

- "MAGNETIC-70" Concentrated Sulphur Paste
- "MAGNETIC SPRAY" Wettable Sulphur
- "CROWN" Brand Wettable Sulphur
- "MAGNETIC" Catalytic Sulphur
- "ELECTRIC" Super-Adhesive Dusting Sulphur
- "MAGNETIC" Humidust

### STAUFFER CHEMICAL COMPANY

429 Lexington Avenue, New York City  
624 California St., San Francisco, Cal.  
230 N. Michigan Avenue, Chicago, Ill.  
Frisport, Texas

## BUY SULPHUR BY STAUFFER

# Camera!



Willis R. Hilliard, Clinton, Ky., who teamed with his father, C. B. Hilliard, to win three blue and three red ribbons in Kentucky Horticultural Society's show at Paducah, exhibits specimens of his fruit to Paducah growers Ted Cooper and Herman J. Yopp, who were re-elected secretary and president, respectively, of the society.



At the Indiana Horticultural Society annual meeting at Indianapolis, AMERICAN FRUIT GROWER photographer found P. D. Baldauf, Cloverdale, left, talking over serious matters with Roy Tuttle, Greenfield. Both are Quality Plus Orchardists for 1940.



An amusing incident was being discussed by these well-known Illinois growers when AMERICAN FRUIT GROWER photographer happened their way. Left to right: F. H. Simpson, Flora; Arthur Foreman, Pittsfield; R. H. Hale, Omaha; L. L. Anderson, Summer Hill.





Dr. Robert E. Wean

## APPOINTED TO STAUFFER RESEARCH DIVISION

**DR. ROBERT E. WEAN** of Purdue University staff has joined the Agricultural Research Division of the Stauffer Chemical Company, world's largest manufacturer of agricultural sulphur and sulphur products. His work will consist chiefly in giving technical assistance to growers and other Stauffer customers on problems relating to soil corrective treatments, insect and disease control and other phases of agriculture. His headquarters will be in New York City.

## CATERPILLAR ANNOUNCES TWO ADVANCEMENTS

**ANNOUNCEMENT** has been made by Caterpillar Tractor Company of two important advancements in the company's organization. Donald A. Robison has been made a vice-president of the company with administrative direction of all selling and advertising activities. The office of general sales manager, which Mr. Robison leaves to assume



Donald A. Robison



Gail E. Spain

his higher duties and responsibilities, is being filled by the advancement of Gail E. Spain. Mr. Spain, who came from Portland, Ore., and received the degree of Mechanical Engineer at Oregon State College, is widely known throughout the construction and agricultural equipment industries.

JANUARY, 1941



# CAP YOUR "Oil Gusher"



**ORCHARD  
MODEL M  
WITH "200-HOUR"  
POSITIVE-SEAL  
TRUCK WHEEL  
LUBRICATION**



**MODEL  
B-QUICK  
FOR FRUIT  
GROWERS**

**\$518 F.O.B. MIL.** Gets your odd jobs done johnny-on-the-spot! Turns short, slips under branches, fits between vineyard and berry rows. Implements to match are cheaper to own and operate than horse equipment. Copper-alloy water-cooled cylinder liners, cam-honed pistons, more piston-displacement (actual power) per dollar. \$570 f.o.b. with lights, starter, muffler.

## SAVES TWO TONS OF GREASE IN THE LIFE OF YOUR TRACTOR

Now you can cap your old "oil gusher" for once and for all. Now you can be free from a tractor that not only wastes two tons of grease but turns it into a GRINDING COMPOUND to cut your truck wheel rollers like so much emery dust.

Model M Rollers last hundreds of hours longer, because dust and grit are POSITIVELY sealed out. Oil is sealed in. Instead of daily greasing, you simply change oil every 200 hours. "Truck wheels-within-wheels," with heavy-duty tapered roller bearings, roll constantly in a bath of CLEAN oil.

No wonder fruit growers say that the Model M takes less power to move itself, passes on more to the drawbar, than any tractor in its class.

# ALLIS-CHALMERS

TRACTOR DIVISION - MILWAUKEE, U.S.A.

TO BETTER LIVING

TO BETTER FARMING

TO MORE PROFIT

ALLIS-CHALMERS MFG. CO.

Dept. 16, Tractor Division, Milwaukee, Wis.

Gentlemen: I want the full story on the units checked below. No obligation to me. I have \_\_\_\_\_ acres.

☐ Model B Wheel Tractor "For All Jobs in Small Groves. For Small Jobs in Big Groves." ☐ Orchard Model M 32 horsepower. ☐ Implements

☐ HD-7 2-cycle Diesel 54 horsepower. ☐ Implements

Name \_\_\_\_\_

Town \_\_\_\_\_

State \_\_\_\_\_

## "TIFFANY"

Cut 1 1/4" limbs and work in narrow places. Sharp hook does not bruise.

No More Handle Trouble

**"TIFFANY"**  
Hammer  
Forged Pruners

will easily stand the strain. Length 24 in., wt. 2 1/2 lbs. Price \$3.00 prepaid. Satisfaction guaranteed. Send for circular of Grafting Tools, Bark Scrapers, Lopping Shears, Briar Hooks and Hand Pruners. Dealers wanted.

C. R. TIFFANY, Mr., CONKLIN, N.Y.

## PRUNERS

Light, simple, and powerful. Tough alloy steel levers will not break or bend.

## HAMILTON

"Spray Guns that pay"

Your Spray Rig is no better than your Spray Gun

See the New Style Hamilton Guns with Controlled Streamline

**W. L. HAMILTON & CO.**  
BANGOR, MICHIGAN

Seven Models A GUN FOR EVERY PURPOSE  
Send for FREE Catalog

AMERICAN FRUIT GROWER

PAGE 33

## GROWERS GET MORE FOR APPLES



## WHEN GROCERS SELL MORE APPLES!

The price of apples moves up or down in step with the law of supply and demand. It follows, then, that the crop in any given year will bring higher returns if something is done to spur demand.

Now let us tell you about a Bemis plan that increases the sale of apples . . . and how you can make this plan work to bring better demand for your apples.

Working hand in hand with nationally known produce merchandisers, Bemis has developed its famous "Sale-of-the-Month" . . . now used by hundreds of retailers. Grocers purchase apples in Bemis Lenonet Open-Mesh Bags and stage their "Sale-of-the-Month" according to the plan, using promotional materials furnished by Bemis. Methods employed have increased sales as much as 410 per cent.

You can share the extra business created by these sales simply by packing and shipping in Lenonet Open-Mesh Bags. Your apples automatically get the nod, when grocers order their "Sale-of-the-Month" stocks.

Mail the coupon below for complete information on how Lenonet Bags can simplify your packing, save money on shipping and increase your profits.



Bemis Bro. Bag Co.,  
426 Poplar St., St. Louis, Mo.

Without obligation, send at once samples, prices and full details of Bemis Lenonet Open-Mesh Apple Bags.

Name \_\_\_\_\_  
Post Office \_\_\_\_\_  
R.F.D. \_\_\_\_\_ State \_\_\_\_\_

## CALENDAR OF COMING MEETINGS and EXHIBITS

Jan. 4—Utah State Horticultural Society annual Convention, Hotel Utah, Salt Lake City.—A. Stark, Sec'y, Logan.

Jan. 8-9—Maryland State Horticultural Society 43rd annual meeting, Hagerstown.—A. F. Vierheller, Sec'y, College Park.

Jan. 8-10—Massachusetts Fruit Growers Association annual meeting, Worcester.—Wm. R. Cole, Sec'y, Amherst.

Jan. 13-14—Southern Illinois Horticultural Society annual meeting, Carbondale.—Cornell H. Eckert, Sec'y, Belleville.

Jan. 14—Vermont Horticultural Society annual meeting, in conjunction with Union Agricultural meetings, Jan. 14-17, Burlington.—C. H. Blasberg, Sec'y, Burlington.

Jan. 14-17—New York State Horticultural Society 86th annual meeting, exhibits and fruit show, Rochester.—Roy P. McPherson, Sec'y, Le Roy.

Jan. 15-17—American Pomological Society 56th annual convention, Hamilton, Ontario, Canada, in joint session with Fruit Growers' Association of Ontario.—H. L. Lantz, Sec'y, Ames, Iowa.

Jan. 21-23—Maine State Pomological Society annual meeting, Armory, Lewiston.—E. L. White, Sec'y, Bowdoinham.

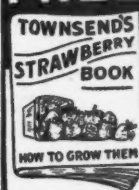
Jan. 21-23—Pennsylvania State Horticultural Association annual meeting, Farm Show Building, Harrisburg.—J. U. Ruef, Sec'y, State College.

Jan. 27-29—Ohio State Horticultural Society annual meeting, Horticulture Bldg., Ohio State University, Columbus, in connection with Farmers' Week.—F. H. Beach, Sec'y, Columbus.

Jan. 29-31—New York State Horticultural Society annual Eastern meeting, exhibits and fruit show, Kingston.—Roy P. McPherson, Sec'y, Le Roy.

Feb. 12-13—West Virginia Horticultural Society 48th annual convention, Martinsburg.—C. R. Miller, Sec'y, Martinsburg.

## FREE PLANT CATALOG



Send today for this valuable "56-Page Fruit Book. Describes and illustrates in colors all the new and better paying varieties of Strawberries, Raspberries, Blackberries, Grapes, New Boysenberry, Peaches, Apples, Pears, Plums, Cherries, and Vegetable Plants. It's a complete culture guide for the commercial grower and the home garden planter. Written by a lifelong fruit grower. It's FREE!

E. W. TOWNSEND SONS

54 Vine Street, Salisbury, Maryland

## Scarff's FALL BEARING "SWEET SEPTEMBER" CHERRY

A true fall bearing sweet cherry. Bright red, delicious. NEW SEEDLESS PEAR, practically seedless, Bartlett quality. New Seedless Concord Grapes. Also Largest and most productive varieties of Apple and other Fruit Trees, Raspberries, Gooseberries, Boysenberries, Blackberries, and Ornamental Fruits. Write for free Catalog TODAY. W. N. SCARFF'S SONS Box 131, New Carlisle, Ohio

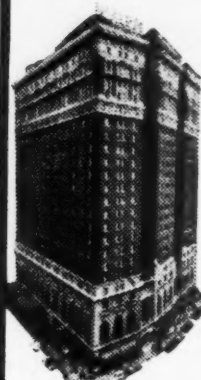
## JUST OUT FREE! FROM AMERICA'S LARGEST Direct-to-You NURSERIES. For a colorful garden, everyone will envy, buy later-State first quality guaranteed stock. Select choice, new and unusual flowers, fruits, seeds, shrubs, roses etc. right from natural color pictures in this NEW BIG FREE catalog. Amazing special collection offers. Free planting guide and gifts for customers. Low prices. Write today!

AMERICA'S MOST BEAUTIFUL  
Nursery and Seed  
BOOK!  
INTER-STATE NURSERIES, 2311 E. Street, HAMBURG, IA.  
AMERICAN FRUIT GROWER

## COMING TO NEW YORK?

### Stop at HOTEL McALPIN

Because it is located in "the center of convenience", McAlpin guests have more time to devote to business and for pleasure.



1 block from  
Penn Station  
and Empire  
State Bldg.  
B. & O. Motor  
Coaches stop  
at our door.

LARGE  
BEAUTIFUL  
ROOMS WITH  
PRIVATE BATH  
FROM  
\$3 SINGLE,  
\$4.50 DOUBLE

## HOTEL McALPIN

BROADWAY AT 34th ST., NEW YORK

Under KNOTT Management  
JOHN J. WOELFLE, Manager

## Maloney's FRUIT TREES

Apple — Peach — Cherry — Pear — Plum  
45 Prices even lower than '40.  
Write for Catalog and send us your list of requirements.  
MALONEY'S NORTHERN GROWN TREES ARE  
GUARANTEED TO GIVE YOU SATISFACTION.  
This 57-year-old firm features the best of the new and old varieties.  
MALONEY BROS. NURSERY CO. INC.  
23 Main Street Danville, New York  
MALONEY CATALOG FREE

## \$1 FRUIT VALUE 10¢ FOR ONLY

To introduce our new SCARLET EVERBEARING STRAWBERRY in all sections of the U. S. East of Rocky Mts.—we will ship you prepaid 12 Big Strawberry plants (regular price \$1.00 for 10¢). Bear Gigantic, luscious, sugary-sweet, ripe berries continuously for over 120 days. Enormous Yield—high as 2 qts. per plant. Reserve plants now for shipment at proper planting season. Supply limited! we reserve right to refund your 10¢ if order reaches us after supply is gone. Mail for plants—and FREE CATALOG showing many of world's finest Fruits and Flowers in beautiful Natural color. NEW SLASHED PRICES! ASSURE AMAZINGLY GREATER VALUES! Satisfaction guaranteed. More than 100,000 satisfied customers since 1890. Write today! BRADLEY BROS., Dept. 112, CARBONDALE, ILLINOIS

### GENE AUTRY HOLSTER SET GIVEN!

A genuine Gene Autry Two-Gun Holster Set and FREE RXG are yours without cost for simply selling 40 Acres American Vegetable and Flower Seeds at 10¢ per large pack. Write NOW for seeds, FREE SINGING LARIAT, and BIG GUT BOOK showing 70 prizes to choose from. SEND NO MONEY—WE TRUST YOU.  
American Seed Co., Inc., Dept. T-15, Lancaster, Pa.

### STRAWBERRIES PAY

Allen's 1941 Berry-Book Describes Best Methods. Plants, Varieties: Premier, Fairfax, Dorsett, Catskill.  
COPY FREE WRITE TODAY  
THE W. F. ALLEN CO.  
22 Evergreen Ave., Salisbury, Md.  
JANUARY, 1941



## IT PAYS TO KEEP ORCHARD RECORDS

(Continued from page 28)

showing some important detail not noted at the time. Also such photographs are valuable for illustrating methods or innovations which may be of especial interest to friends and fellow orchardists. A good airplane photograph of the orchard is most helpful and useful.

Some of the tangible results realized by the writer through the keeping of orchard records are given as a practical example.

1. A closer touch with and deeper interest in tree growth and production habits was acquired.

2. Each of 8000 apple trees was observed individually at least once annually and those needing special treatment, removal or replacement so marked.

3. These records furnished a practical orchard map, annually brought up-to-date. They were referred to at numerous times and for many purposes.

4. Analyses of records showed clearly the rows and blocks receiving insufficient pollination; the effect of bouquets placed in certain areas; distances of effective pollination; and varietal differences in amount of pollination needed.

5. The orchard diary has been a frequent source of needed information where special treatments were to be repeated, where there was a question as to dates or amounts of fertilizers applied, weather conditions at the time a certain spray was applied or how codling moth emergence peaks compared with those of the previous year.

6. Many photographs tell a story that would otherwise have been lost. Pictures showing older methods and equipment become more valuable as the years go by.

Professional scientists and research workers in industry and agriculture, as well as manufacturing concerns know the prime importance of adequate records and notes. The modern industrial concern must keep detailed records of methods and production rates, as well as costs. Yet too few fruit growers keep the records that would mean a saving of both time and money, as well as eliminating uncertainties of a general impression without the essential details in recorded form.

JANUARY, 1941



Model HG-42 Cletrac Pulling a Two Bottom 14" Plow, 17 h. p. at the drawbar—20-1/2 h. p. at the belt.

## TRU-TRACTION<sup>®</sup>

Will Solve Your Problems

\*TRU-TRACTION means power on both tracks at all times—ONLY Cletrac gives you TRU-TRACTION.

Do you have hills or soft spots on your farm that you have to plow around? Perhaps these places represent the acres that if cultivated would mean the difference between a profit and loss for you. The Cletrac HG with Tru-Traction will plow, plant or cultivate this land for you—and you don't have to wait for the weather to be right. Instead of getting behind this year with your spring work, see your Cletrac Dealer for a demonstration and see how a Cletrac Tru-

Traction outfit will smooth out your hills and go right through the low spots, too. See for yourself why this outfit will work 12 months of the year, regardless of weather conditions.

The Cletrac Model HG is built in three widths—31-inch for orchards, vineyards and narrow row crops—42-inch for regular farm use, and 68-inch for all around and regular row crops of a general nature.

The Model HG has a full line of attached tools—planters, cultivators, mowers, weedeaters, sprayers, etc.



THE CLEVELAND TRACTOR CO., Cleveland, Ohio

WRITE NAME AND ADDRESS HERE AND MAIL FOR MORE INFORMATION ON THE MODEL HG CLETRAC. 1 FARM.....ACRES.



ELGETOL, the new non-caustic dinitro dormant spray, has been thoroughly tested by unbiased entomologists in leading universities and experiment stations\* who have enthusiastically approved its high insecticidal and fungicidal efficiency. Last year it was extensively used by commercial growers who have the highest praise for this inexpensive, non-irritating, water soluble dormant spray. This year, try it yourself for control of APHID, BUD MOTH, OYSTER SHELL SCALE, PEACH LEAF CURL, and as a ground spray control for APPLE SCAB and CHERRY LEAF SPOT. Write for our regional spray chart which gives recommendations and directions for using ELGETOL in your section of the country.

\*Names on request.

STANDARD AGRICULTURAL CHEMICALS, INC.

P.O. Box 642, Sacramento, Calif. 1301 Jefferson St., Hoboken, N. J.

AMERICAN FRUIT GROWER

PAGE 33

## OPPORTUNITY ADS

Only 15c a Word—CASH WITH ORDER. Count each initial and whole number as one word.  
ADDRESS: AMERICAN FRUIT GROWER, 1370 Ontario Street, Cleveland, Ohio

### BABY CHICKS

**BEFORE BUYING CHICKS, GET DETAILS FAMOUS Big Boy Chick Raising Plan.** You get proper size oil or electric brooder to use free, at no increased price. Thousands satisfied customers acclaim U.S.-Approved Big Boy Chicks "America's Finest." Easy payment credit plan optional. Write ILLINOIS STATE HATCHERIES, 300 Jefferson, Springfield, Illinois.

**DON'T BUY CHICKS FROM PEDDLERS.** ORDER Davis chicks—save money and be protected. Write for free catalog. DAVIS POULTRY FARM, Route 3, Ramsey, Indiana.

### BEEES

**BEEES—GOOD SIDE LINE, PLEASURE, PROFIT.** Send \$1.00 for book "First Lessons in Beekeeping" (new edition), and one year subscription. Catalog free. AMERICAN BEE JOURNAL, Box G, Hamilton, Illinois.

### BLUEBERRIES

**100,000 GUARANTEED TRUE-TO-NAME 2 AND 3-year-old standard variety cultivated blueberry plants for Spring gardens.** We specialize in the best. Sold with earth on roots. Satisfaction assured if you buy direct from reputable grower. Free colored folder. HOUSTON ORCHARDS, Hanover, Massachusetts.

### FACE PROTECTORS

**USE E-Z "C" FACE PROTECTOR FOR SPRAYING lime, sulphur, oil, etc.** Special E-Z "C" feature provides clear view continuously. Protects lungs. See display ad Page 30. Write CESCO, 2308 Warren Blvd., Chicago.

### FOR SALE

**430 ACRE ORCHARD ON LOOKOUT MOUNTAIN** eighty miles north of Birmingham, Ala. 15,000 peach and 3200 apple trees, \$50,000. 213 acres near Summerville, Georgia, 10,600 peach trees, 2300 apple, \$40,000. 430 acres near Adairville, Georgia, 15,500 peach trees, \$25,000. Each unit fully equipped and good manager. Will sell separately or as a whole. Orchards in first class condition. They produce mountain fruits that are famous for color and flavor. For further details write JOHN F. FUGAZZI, P.O. Box 175, Clearwater, Florida.

**2270 ACRES NEAR ALBANY, GEORGIA.** 35,000 peach trees, mostly bearing, 2000 pecans, \$80,000. Willing to sell half interest. For details write J. F. FUGAZZI, Clearwater, Florida.

### MALE HELP WANTED

**STEADY WORK—GOOD PAY. RELIABLE MAN** wanted to call on farmers. No experience or capital required. Pleasant work. Home every night. Big money every day. Wonderful new proposition. Particulars free. Write McNESS CO., Dept. 465, Freeport, Illinois.

### MISCELLANEOUS

**EVENUALLY YOU'LL LIVE IN FLORIDA. KEEP** in touch with its agricultural opportunities by subscribing to its leading citrus and truck magazine. 50c per year; 3 years, \$1.00. FLORIDA FARM AND GROVE, Jacksonville, Florida.

### NURSERY STOCK

**EAT STRAWBERRY SHORTCAKE JUNE TO DECEMBER** first year you get our healthy everbearing plants. Only 2c each postpaid. 100 sufficient family use. Easy to grow. Big profits. \$500.00 acre possible. Instructions furnished. 8000 sets acre. \$75.00 PREPAID. Also bearing age fruit trees, berry bushes, grapes, thornless Boysenberries, and cultivated blueberries larger than 5c coin. Complete natural color catalog FREE. SOUTH MICHIGAN NURSERY (Dept. 23), New Buffalo, Michigan.

**FRUIT TREES, BERRY PLANTS, ORNAMENTALS.** Complete line of fruit and nut trees; blueberry, Boysenberry, strawberry, raspberry, grape, asparagus plants; flowering shrubs, shade trees, and evergreens. One of America's leading nurseries selling direct with 75 years' production experience guarantees satisfaction. Send for free catalog. BOUNTIFUL RIDGE NURSERIES, Box F141, Princess Anne, Maryland.

**MAKE YOURS A HOME TO BE PROUD OF! SEND** today for Inter-State's NEW beautiful, useful, money-saving nursery and seed catalog. It's Free. New Perennials, roses, shrubs, trees, vines, fruits, seeds, bulbs, etc. Natural colors. First quality guaranteed stock. America's Largest Direct-To-You Nurseries. INTER-STATE NURSERIES, 20 E. Street, Hamburg, Iowa.

**FRUIT TREES GROWN BY VIRGINIA'S LARGEST** growers, offered at lowest prices in thirty years. The new improved varieties of apple and peach at common variety prices. Write for New Low Price List, offering a complete line of fruits and ornamentals. WAYNESBORO NURSERIES, INC., Waynesboro, Virginia.

**BLIGHT RESISTING CHESTNUT TREES, APPLE** seedlings and root grafts. VIRGINIA TREE FARMS, Woodlawn, Virginia.

PAGE 36

**THIN-SHELL BLACK WALNUTS—RAPID GROWERS,** beautiful shades; bear 2nd year. Nuts large, easily cracked. Catalog free. CORSICANA NURSERY, Corsicana, Texas.

**25,000 NEW, HARDY VARIETIES PEACH AND APPLE** trees. Catalog free. MARKHAM Fruit Breeder, Xenia, Illinois.

### PATENTS

National Trade Mark Company  
Murray Building  
Washington, D. C.  
Trade Mark Specialists

**PATENT YOUR IDEA. WRITE IMMEDIATELY FOR** two free books "Patent Protection" and "When and How to Sell an Invention." Fully explain many interesting points to inventors and illustrate important mechanical principles. With books we also send "Evidence of Invention" form. Prompt service, reasonable fees, forty-three years' experience. Avoid risk of delay. Address VICTOR J. EVANS & CO., Registered Patent Attorneys, 463-A Victor Building, Washington, D.C.

**INVENTORS—DON'T DELAY. PROTECT YOUR IDEA** with a Patent. Secure "Patent Guide" and "Record of Invention" form—FREE. Preliminary information furnished without obligation. Write CLARENCE A. O'BRIEN, Registered Patent Attorney, 1A52 Adams Building, Washington, D.C.

### POSITION WANTED

**ORCHARD MANAGER, AGRICULTURAL SCHOOL** graduate, 14 years' experience, seeks opening, New England or Eastern New York. Address Box 141, AMERICAN FRUIT GROWER, 1370 Ontario Street, Cleveland, Ohio.

### POULTRY

**NEW ENGLAND POULTRYMAN AND NORTHEASTERN** Breeder. Special offer—six extra months free with your new or renewal subscription at regular rates. 1 year for \$1.00, 3 years for \$2.00, 5 years for \$3.00. Interesting news and views. Valuable editorial material on skillful breeding, profitable production, and efficient marketing. Carefully censored advertising. Nationally read by poultry leaders. Subscribe now! NEW ENGLAND POULTRYMAN, 4F Park Street, Boston, Massachusetts.

**MAKE MORE MONEY RAISING POULTRY. COLORED** pictures of poultry and most common poultry diseases supplement valuable information. Six months 10c, two years 25c. AMERICAN POULTRY JOURNAL, 560 South Clark, Chicago, Illinois.

**MONEY TO BE MADE IN POULTRY THIS YEAR.** Poultry Item tells why and how. This leading poultry magazine 4 months 10c. Highly illustrated. Best writers. Get big bargain winter issues. THE POULTRY ITEM, Box G, Sellersville, Pennsylvania.

### SILK HOSIERY

**BEAUTIFUL SILK HOSIERY. 5 PAIRS \$1.00 (TRIAL** 25c). Three exquisite full-fashioned \$1.25. DIREX, AP346W Broad, Savannah, Georgia.

### STRAWBERRY PLANTS

**STARTLING NEW STRAWBERRY—MAJESTIC.** Patented October 24, 1939. Has been thoroughly tested four years by experiment stations, nurseries and numerous growers in eight states. Tests proved extraordinary yield, size, flavor and shipping quality. Free from leaf spot and other diseases. Plants inspected. Plants priced on request. E. L. RUSSELL, Jonesville, Virginia.

**SPECIAL! 200 YELLOW FREE BLAKEMORE OR** Dunlap plants delivered \$1.00. Free beautiful colored Calendar Catalog quoting sensational low prices on strawberries and vineberries. WALLER BROS., Judsonia, Arkansas.

**MILLIONS CERTIFIED YELLOW FREE BLAKE-** more strawberry plants. Write for prices. B. B. McUMBER, Greendale, Tennessee.

## Propagation of Plants

By M. G. Kains and  
L. M. McQuesten

New, fully illustrated volume covering propagation by seeds, layers, grafting, and budding. Chapters included on nursery and greenhouse management, also 38-page section on fruit tree stocks. 556 pages of practical information for the commercial plant propagator, the teacher, the student, and the experimenter.

Sent postpaid on receipt of \$3.50

**American Fruit Grower**  
1370 Ontario St. Cleveland, Ohio

AMERICAN FRUIT GROWER

## HANDLING BLACK WALNUT KERNELS

**AT THE** Roanoke meeting of the Northern Nut Growers' Association, Frank E. Brown, Jr., of Roanoke presented an account of mountain methods of producing and marketing black walnut kernels. In one small valley of five square miles area near Roanoke, \$6500 worth of black walnut kernels were marketed, netting the producers about 22 cents a pound. For the community in question, this was an important item of income.

The shelling of nuts in the mountains is largely a family affair, a fireside occupation for evenings and rainy days. In many cases one member of the family cracks and the others pick. Some crackers are adept at striking the nut in a way that will yield large pieces. In other cases individual members gather, crack and pick their own. Many producers immerse the nuts in hot water before cracking to toughen the kernel and facilitate its separation from the shell.

Most of the crop in the vicinity of Roanoke is cracked before Christmas but in Tennessee many are carried into the later months and sometimes until the following year. In Tennessee the nuts are gathered, hulled and stored in good condition in a dry, airy place such as a corncrib. Nuts left on the ground until late produce a poor quality product.

Producers sell largely to country stores, exchanging for other merchandise at prices very close to what the stores receive. These trade goods are considered about as cash transactions. Peddlers also buy nuts on their routes for cash. In both cases the nuts move to large lot handlers, such as the produce houses, where they are cured, sifted and packed for sale direct to bakers and other users. Few producers cure their kernels, and they would experience losses from heating and molding if they shipped by mail or express in tight packages.

Country-run kernels contain considerable moisture, shrivelled kernels, siftings and shell. Drying, picking and sifting entail considerable shrinkage, usually from 10 to 15 per cent and much labor if picked shell-free. Mr. Brown has found it practicable to buy on grades quoting shell-free, sifted, free of shrivel, average, under average at various prices. Those with mold or foreign matter are rejected as unfit for use. Each lot is kept separate to avoid mixing with unfit stock. After collection in large lots, the marketing is the same as for mechanically produced kernels.—GEORGE L. SLATE, Sec'y, Northern Nut Growers' Assn., Geneva, N. Y.

## STATE NEWS

(Continued from page 19)

Victor Felter of Indianola, president, and C. C. Smith of Charles City, vice-president, R. S. Herrick of Des Moines, secretary.

Iowa Fruit Growers' Association re-elected its officers, as follows: Robert M. Clark of Mitchellville, president; C. L. Strong of Logan, vice-president, and R. S. Herrick, secretary-treasurer.

A feature of the fruit growers' program was the discussion led by Robert M. Clark of Mitchellville on a proposed Iowa apple labeling law similar to the one now in force in Missouri. A bill covering such a law will be introduced into the Iowa Legislature only if a majority of fruit growers in the State favor it.—R. S. HERRICK, Sec'y, Des Moines.

**NEW JERSEY—George Smith, 94, who be-** came known as the "Apple King" of New Jersey after retiring as a locomotive engineer at the age of 54 to enter agriculture, died Dec. 9 at his home near South River.

Mr. Smith was one of the first farmers in the State to construct a cold storage plant on the grounds of his 72-acre farm. When he had it built in 1910 he was the object of ridicule by other near by farmers, but later many of them followed suit.

JANUARY, 1941



# NEW

- CO<sub>2</sub> ELIMINATOR
- STEEL SKID PLATFORM

By HANDY ANDY

## CO<sub>2</sub> ELIMINATOR •

Recent installations of refrigerating equipment in fruit farm apple storages have included "carbon dioxide eliminators" to improve the condition of the air in the rooms. These eliminators consist of balanced aluminum louvers located near the floor of the storage rooms, to expel the heavier-than-air gases.

As the fresh air is pulled into the room by the fan, it naturally creates a slight pressure. This is enough to open the balanced louvers and the carbon dioxide is then forced out. The eliminators are



constructed with an adjustable balance so that varying conditions can be taken care of without trouble.

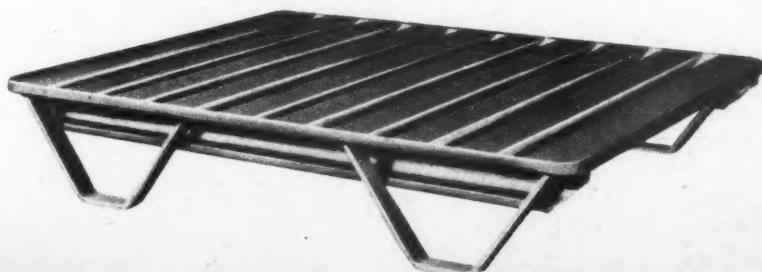
The hinged damper is placed at the indoor end of a tube of galvanized metal; the outer end is covered with a screen. Adjustment of the force necessary to tilt the louvers is made by sliding a small weight up or down, in respect to the axis; the thumb screw for securing this weight in position appears in the accompanying illustration.

The eliminator is a development of the Allen Refrigerating Company and is manufactured by the Frick Company.

If you've run out of ideas for keeping the inside of your boots dry, you will want to try the calcium chloride method. Fill a small sack about the size of a tobacco bag with the chemical and drop one in each boot. The calcium chloride will absorb the moisture from the boots and they will be dry when you put them on again.

## STEEL SKID PLATFORM •

Growers who have had difficulty keeping their wooden skid platforms in good, serviceable condition will be interested



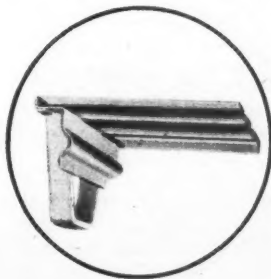
in the newly introduced sheet metal platform made by The Service Caster and Truck Company.

Featuring a principle of "Strength Without Weight," the manufacturer lists as advantages of the "Steelwave" skid (1) greater lightness and strength due to use of light gauge metal corrugated two ways, (2) greater safety to loads and workmen due to rounded corners, (3) greater resistance to wear from jamming, loading and impact under heavy service; (4) no possibility of swelling, shrinking, warping or buckling from atmospheric conditions, (5) unaffected by standing loads, and (6) no splinters or broken top-boards possible.

Fortified with a comprehensive portfolio containing the most profitable produce selling methods of the country's leading merchants, salesmen of the Bemis Bro. Bag Co. are equipped to co-operate to the utmost with fruit and vegetable dealers. This new portfolio contains the "Sale of the Month" plan developed by the company for the purpose of moving large lots of fruit and vegetables in open mesh bags, together with sales promotion material. The portfolio is available without charge to key men in organizations handling fruits and vegetables in open mesh bags.

The increased use of consumer packages for fruit has developed a greater need for accuracy in weighing. Since one of the factors in the successful marketing of fruit is a full pack, growers will be interested in obtaining a copy of the folder published by the Exact Weight Scale Company which describes their many types of scales and bagging equipment.

"Construction and Management of Air-Cooled and Cold Storages with Special Reference to Apples" is the title of Circular Bulletin 143 issued by the Michigan State College at East Lansing. Author of the bulletin is Roy E. Marshall, pomologist of Michigan State College. The technique discussed in the publication is the result of 18 years of research work by Marshall.



★  
**ARE YOU AND YOUR SAWS ALL Set FOR THE SAP?**

★

1st Rule: Prune before sap rises. 2nd: Check saws and shears before pruning. 3rd: Replace doubtful tools with ATKINS.

**PRUNING Saws**

A Saw To Those Who Prune.

**E. C. ATKINS AND COMPANY**  
484 S. Illinois St., Indianapolis, Ind.

# ATKINS

Send for FREE Catalog.

You will need a dependable sprayer to get good control during 1941.



Universal sprayers have proven their dependability in the field. We have a sprayer that will meet your requirements.

Write for descriptive folder.

**UNIVERSAL POWER SPRAYER CO.**  
PLYMOUTH MICHIGAN

**SAVE MONEY**

**GET OIL on Credit**

**PAY LATER**

Order your Auto, Truck or Tractor Oil direct. You get higher quality, lower prices, and easy credit. Send no money. We'll ship you all the oil you need for the next six months. Sign no note or mortgage. Try it at our risk. Guaranteed best quality you've ever used. We stand the freight. Prices going up! Order now for immediate or Spring Delivery at present low prices.

**SATISFACTION OR NO PAY!**  
Valley Oil, Super-Refined, Acid-Free, Highest Flash and Fire Tests, lasts longer and lubricates better. That's why this 75-year old retail firm can ship to you ON LONG CREDIT and on NO-RISK TRIAL.

Write today for information—no obligation.

**VALLEY OIL COMPANY**  
Dept. 178, Cleveland, Ohio

**FREE!** 600 Full Size FOOD & HOUSEHOLD PRODUCT ASST.

SEND NO MONEY! Rush name and address for 1st Assortment of FOODS, GROCERIES, SOAPS, etc. Full size packages, worth \$6.00. Yours ABSOLUTELY FREE! Show these products to friends and neighbors. Take orders for seasonal values, more than 200 quality products used in every home. Earn big profits, full or spare time. No experience necessary. Write for FREE \$6.00 Assortment of Products NOW. ZANDL, 3645 Monmouth, Cincinnati, Ohio.

**BOLENS GARDEN TRACTORS**

BOLENS Power Hoe mechanizes gardening and lawn mowing — BOLENS Models AGA and BGA do field and garden work on suburban farms. BOLENS HI Wheels do plowing and other heavier work, also gardening on farms up to 20 acres. Learn what BOLENS can do to make your dreams of real country living come true. Write BOLENS, 1116 Park Street, Port Washington, Wis.



# ROADSIDE MARKETING



## THE "SELLING STORY" OF SIX SUCCESSFUL MARKETS

By RICHARD T. MEISTER

**W**HY does one roadside market return generous profits and another barely make enough money to cover its expenses? Why is one roadside market a resounding success while another is a miserable failure?

Simply because the resourceful owner of a profitable market has devised ways of overcoming his local selling problems. He realizes there is no universal rule which insures success. For he knows what is good practice for one market may be poor practice for another market.

Here is the "selling story" of six roadside markets located in different parts of the country—a story which tells how each market overcame its selling problems.

Mark Bishop, president of the Connecticut Pomological Society, overcame his local marketing problems by building a cold storage to lengthen the marketing season at his fruit stand and by advertising in local newspapers. The Bishop roadside market is located off the main road, so advertising brings people from near-by towns to the Bishop market.

C. H. Gowdy of Greenwich, Conn., who operates a profitable roadside market which does \$30,000 worth of business a year, met local conditions by advertising widely, for his market, like Bishop's, is located on a little-traveled road. Being near the wealthy New York area, Gowdy sells a great variety of products.

S. A. Green of Hillsdale, Mich., conquered his selling problem by means of signs located along the road informing the motorist of the Green fruit market. Because he is located on a well-traveled road, his publicity methods sometimes result in more customers patronizing his stand than he can handle.

J. J. Hill, who operates the Montrose Orchards and roadside market at Montrose, Mich., overcame his local selling problems by direct mail advertising. During a heavy crop year in his orchard, Hill had printed 16,000 folders advertising his fruit. These folders were scheduled to be sent out in four mailings. Before the time arrived for the final mailing, all his apples had already been sold.

W. P. Mathews of Glendale, Ohio, solved his selling problem by locating his several roadside markets away from the orchard so that they are on a main, well-traveled highway. He says the right-hand side of the road going to town is the best location. Motorists, says Mathews, stop on their way home, not when starting out.

Prof. A. M. Musser, in charge of a unique roadside market at the Clemson Agricultural College, Clemson, S.C., met his selling problem by locating his market in the fork of two well-traveled roads and by building a reputation of selling only high quality products. Proof of this is the fact that customers come from as far away as 137 miles to the Clemson roadside market. This market is described more fully by Prof. Musser in this issue.

PAGE 36



### UNIQUE SIGN SPELLED SUCCESS

Some years ago G. Leslie Smith, progressive Rock Island, Ill., grower, put the above "apple sign" atop his first roadside market building (illustrated above), which he called the "Apple House." This unique sign and the fine quality of the cider Smith offered for sale were the first two steps in building a business which has boomed in recent years until he has had to enlarge the original roadside market to almost three times the size.

## A PRACTICAL LESSON IN MARKETING

(Continued from page 12)

period for our fruits. The earliest peaches begin ripening between May 25 and June 10 and continue until the middle or latter part of August. Dewberries begin ripening about June 1, apples the last week in June or first week in July to December 15, grapes (bunch) second week in July to the second week in September, muscadine grapes September and part of October, pecans in November. We ship a great many packages of fruit each summer to points as far as Boston, Detroit, Indianapolis and Miami at the request of customers who ate some of the fruit at the stand and want to send some to friends. We sell very few vegetables largely because most of our vegetable research work is done along the Atlantic Coast.

The Dairy Department sells ice cream, coffee cream, whipping cream, sweet milk, buttermilk, cottage cheese and butter. The largest percentage of their business is accounted for by ice cream sales. Of the flavors of ice cream sold, fresh peach is by far the most popular. Many times more peach ice cream is sold than any other flavor. The Golden Jubilee variety is preferred by the Dairy Department. If

AMERICAN FRUIT GROWER

they cannot get that variety, the Vedette or Eclipse is used, and in case other yellow fleshed peaches are not available, they will take Elberta, although they do not prefer so strong a flavored peach as the Elberta. Neither do they want white fleshed peaches because the ice cream sells better and seems to be more enjoyable to people if they can see the particles.

The fresh peaches are usually bought from the Horticultural Department when we have a large supply, are peeled, pitted, cut in small pieces or mashed, sugar added and quickly frozen solid. In this state the peaches keep for a year or more in perfect condition. Ice cream made from these frozen peaches in April or May tastes just the same as ice cream made from fresh peaches during the peach season. If the customer asks if the cream is made from "fresh" peaches we say yes.

In summing up the factors that have made this market quite successful, I would name the following: (1) Located in the fork of two well-traveled paved highways. (2) Any direction in which this market is approached the customer must first pass orchards and vineyards. (3) The large number of products on sale during the season. The many varieties of the various fruits and the considerable number of kinds of dairy products. Some customers stop to buy ice cream and are attracted by the fruit and then buy fruit. Others stop to buy fruit and also stay and eat or take home some ice cream. (4) The long season, April 1 to December 15, that this market is open. (5) Good products packed in suitable containers. Of course, we have culls from our orchard the same as anybody else but we do not try to sell culls at No. 1 fruit prices. We sell culls at greatly reduced prices. Each grade of fruit is priced accordingly and we do not try to sell anything that is not exactly as we represent it. (6) We give good measure. When we who have charge of the market buy fruits we always like to get good measure and if we are cheated on measure we do not return to such places. Therefore, we try to give our customers the lawful amount and slightly over the amount of their purchase.

We sell all of the fruit from our experimental and college orchards at our Roadside Market. We do not raise any fruit simply to sell at the Roadside Market. All fruit grown has been raised for another purpose and in order to help the department finances and enable us to do many more things than our other appropriations allow us to do, we market the fruit in this manner. The actual selling cost is about five per cent.

### FORCEFUL FOLDER MOVES CROP

Last fall when their Jonathan crop from some 160 acres of trees was ready, the Triangle Orchards of Valley City, Ill., sent out a special direct mail announcement to 200 wholesalers and jobbers throughout the Middle West. This attractive folder pointed out that Triangle Brand Jonathans were ready for immediate delivery and that they were "premium packed" for greater "eye appeal" and increased apple sales. So forceful was the sales story told by this folder that the entire crop was sold within 10 days.

JANUARY, 1941



# Tough



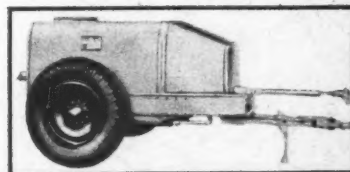
**You get downright Good Service out of the BEAN because we build downright Good Service into it!**

**IT'S TOUGH!** It's rugged! Designed for long, hard, trouble-free operation. Built of finest materials that combine strength & durability with minimum weight. Equipped with the matchless BEAN Royal Pump. Horizontal in design for maximum efficiency. Equipped throughout with ball and roller bearings. Heavy long-wearing eccentrics instead of ordinary cranks. Extra-heavy-duty connecting rods. Long-wearing plungers with easily & cheaply replaced cups. Seamless steel cylinders, lined with porcelain. Trouble-less ball valves. And many other features.

As a result of BEAN design, BEAN engineering and BEAN construction you get sprayer service that makes money for you & saves money for you every day of the spraying year.

## Look at this "Husky"

Connecting rods have to work against heavy pressures. BEAN spreads this load over an extremely large bearing area and carries it on genuine Hyatt Roller Bearings. Crosshead pins are hardened steel and ground & have a special bronze bearing with automatic lubrication for long life.



**WE BUILD** a complete line of Power Sprayers, four-wheel and tractor-pull, in 15-, 20-, 30-, 35- and 55-gal. capacities. Pumps designed particularly for today's high pressures. Also power & traction Crop Sprayers and Dusters, Cleaners and Graders for both orchard and row crops.

**SIGN and send the coupon for complete BEAN Sprayer Catalog**

**BEAN** SPRAYERS  
*Better* ALL Ways

**JOHN BEAN MFG. CO.** Div. of Food Machinery Corporation  
15 Hosmer Street, Lansing, Michigan  
104 West Julian Street, San Jose, California

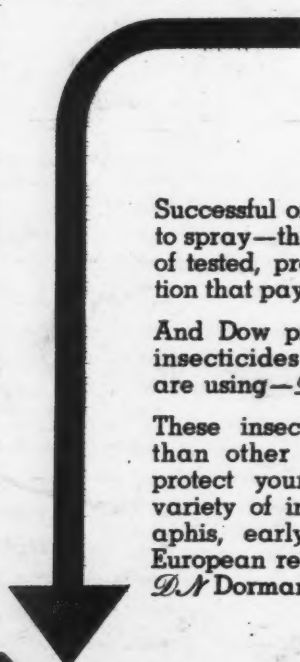
Please send your 1941 Sprayer Catalog to:

NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
No. OF ACRES \_\_\_\_\_  
KIND OF FRUIT \_\_\_\_\_



# PROTECTION

*that Pays*



Successful orchardists know that it pays to spray—that spraying with insecticides of tested, proven effectiveness is protection that pays big dividends.

And Dow produces a group of potent insecticides that progressive growers are using—*DN* Dormant sprays.

These insecticides are more effective than other dormant sprays and will protect your crop against a greater variety of insects including rosy apple aphid, early green aphid, bud moth, European red mite and San José scale. *DN* Dormant sprays mix easily, are very

economical to use, and harmless to both workers and equipment.

Use these proven insecticides for better crop protection. Hundreds of growers throughout the country do. They know that Dow insecticides—there is one for every purpose—meet specific needs in specific districts and that each one is developed scientifically to be as effective as possible. For more complete information write.

THE DOW CHEMICAL COMPANY  
MIDLAND MICHIGAN

Branch Sales Offices: New York City, St. Louis, Chicago



*DN* DORMANT  
SPRAYS



THERE IS A  INSECTICIDE  
FOR EVERY PURPOSE

In the post-bloom season "MIKE" Sulfur will protect your crop without burning the foliage—give the leaves a chance.